DISTRIBUTION OF INCOME IN IRAQ, 1971

by

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Abstract

Shakir Moosa Issa Distribution of Income in Iraq, 1971

This study examines the size distribution of income and the degree of inequality in Iraq in 1971, by region, governorate and for the country as a whole, for households, individuals and socio-economic groups. It also examines changes in income distribution since 1954.

The main findings are that the share of wages in national income declined from 1964 to 1971, and that wage rates in the oil, government and manufacturing sectors grew slower than did per capita income. From 1954 to 1961 there was a slight decline in inequality, but a sharp increase from 1961 to 1968. From 1968 to 1971 inequality again decreased in terms of both cash and adjusted income.

In 1971, the degree of inequality was less when incomes were adjusted for such items as imputed rent and income in kind. The distribution for individuals was more equal than that for households.

There was a more unequal distribution in urban areas and the average incomes in urban areas were greater than those of rural areas.

Average incomes and the degree of inequality were higher in the Central region than in the Northern and Southern regions. Inter-regional comparisons of rural and urban distributions show rural inequality to have been less than urban inequality in the Northern and Southern regions, while the reverse was true for the Central region.

Both industrial and agricultural output, education and health services are concentrated in the Central region, where productivity and growth rates were highest during the 1956 to 1971 period.

Highly skilled and qualified labour was also concentrated in the Central region - especially in Baghdad - where its income was, on average, one third higher than in the Southern region and one quarter higher than in the Northern region.

The Kuznets hypothesis was supported by the data for the rural areas but not the urban areas or the country as a whole. In the rural areas equality was found to have been inversely related to the rate of population growth and the degree of urbanization and positively related to the primary school enrolment rate. In urban areas, equality was positively related to urbanization and population growth and to the urban literacy rate. The share of industry in GNP was inversely related to equality.

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List of Symbols, Measurement Units and Abbreviations

Symbols

0	Not applicable
0.0	Nil or negligible
-	Not available

Measurement Units

ID.	Iraqi Dinar = 1,000 fils = £1.00 in 1956 and = £1.17 in 1971
Meshara	= 0.25 hectares = 0.62 acres

Abbreviations

IPC	Iraqi Petroleum Company
GDP	Gross Domestic Product
GNP	Gross National Product
NNP	Net National Product/Income

List of Administrative Units and Definitions

Administrative Units

The administrative unit in Iraq is the governorate (Mohafadha). The country was divided into 16 governorates in 1971. Before 1969 there were only 14 governorates which were called (Liwas). The names of many of them have been changed.

In 1956 Nineveh governorate was called Mosul and it included Dhok Qadha, which became a separate governorate in 1969. Qadisiya governorate was called Diwaniya, and it included Samawa Qadaha which became Muthanna governorate. In 1976, Kirkuk governorate changed its name to Ta'meem and new governorates have been created. These include Salah Al-Deen governorate (which was part of Baghdad) and Najaf governorate (which was part of Kerbela).

Below the 16 governorates of the country that have been used in this study are given, divided into three regions. Where the names have been changed the old names are given in brackets.

Northern Region: Dhok, Nineveh (Mosul), Sulaimaniya, Kirkuk and Arbil.

Central Region: Diala, Anbar (Ramadi), Baghdad, Babylon (Hilla), Kerbela and Wasit (Kut).

Southern Region: Qadisiya (Diwaniya), Muthanna (Samawa), Thi-Qar (Nasiriya), Maysan (Amara) and Basrah.

Definitions

Cash Income: Money income from all forms of activity before deduction of taxes.

Adjusted Income: The addition to cash income of imputed rent and income in kind.

Small Scale Industrial Establishment: Establishments with less than 10 workers.

Large Scale Industrial Establishment: Industries employing 10 workers and more.

Rural Areas: The areas outside municipal boundaries with no electricity and water.

Urban Areas: Located within the municipal boundaries.

Serifa Camp: An area in Baghdad established before 1954, consisting of small huts called "Serifa" (Shanty housing) built either of palm matting or of mud.

CHAPTER I

Introduction

A The Scope of the Study

The main purpose of this study is to provide an estimation of overall, regional and urban-rural size distribution of income and a measurement of the degree of income inequality in 1971. Although, the study is limited to cross-section data, an attempt is made to provide an economic analysis of its results.

Recently, the subject of the size distribution of income has become one of the main areas of emphasis in economic development literature, and of an increasing interest in both developed and developing countries. Detailed studies have only become possible with the availability of data collected and organised mainly by statistical bodies in these countries, in response to the perceived need to evaluate the effect of economic development on income distribution and vice versa.

The early work on the size distribution of income by Kuznets raised the important relationship between income distribution and development.[1] The argument in favour of greater inequality in the early stage of development is that by concentrating wealth and income in relatively few hands, this group would have a lower propensity to

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1 Kuznets, S., 'Economic Growth and Income Inequality', American Economic Review, Vol. XLVI, (March 1955).

consume and therefore would provide the necessary saving for future growth.[1] On the other hand, it has been argued that the major part of the funds of a higher income group do not necessarily find their way to productive investment.[2] Further, poverty can be expected to act as an obstacle to development: it provides little incentive for greater efficiency, it retards the overall capacity for work, it depresses domestic demand for the products of the modern sector, and it reduces capital accumulation by the self-employed.[3]

The importance of the subject resides in the fact that though it is a question of social equity on the one hand, it is also a question of economic efficiency and growth, through the effects of income distribution on saving. On the consumption side, income distribution plays a major role in influencing the level as well as the structure of total demand: people of different levels of income have varying propensities to consume different categories of goods and services.

In Iraq, both policy makers and planners have long been aware of the importance of this subject. Unfortunately, the available evidence revealed little about the pattern of income distribution or the degree of inequality that prevailed nationally or regionally. Great reliance was therefore placed on per capita income as a development indicator.

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1 Kuznets, S., 'Inequalities in the Size Distribution of Income',in Economic Growth and Structure, Selected Essays, Heinemann Educational Books Ltd., London, 1966, p. 291.

2 Fitchett, Delbert A., Land Concentration and Income Distribution in Several Latin American Countries, The Rand Corporation, Santa Monica, California, April 1966, p. 10.

3 Figueroa, Arevalo A. Abundia, Income Distribution, Employment and Development, the case of Peru, (unpublished Ph.D. thesis) Vanderbilt University, 1972, pp. 3-6.

This was due to the absence of data on the size distribution of income. The economic, social and financial policies of the various National Development Plans were greatly concerned with the need for measures to bring about "a more equal distribution of income, a lessening in the disparity in the distribution of income and wealth".[1] More consideration to the "geographical distribution of Plan projects over the various governorates"[2] was also emphasised.

With government control of the huge oil revenues, it is the government decisions on the way that this income is spent that largely determine the overall distribution and what proportion of this income will be at the disposal of the lower income groups.

All the politicians of the different parties governing Iraq were aware of the economic and social inequality that existed despite the country's wealth of natural resources. In the early 50's the country was described, with its widespread "poverty and backwardness" and its land tenure system "... closest to a feudal society in modern times".[3]

After the 1958 revolution, a series of reforms took place. The most important were land reform (1959), control over oil resources (1961), nationalization of major industries and banks (1964) and the nationalization of oil companies (1972).

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1 Ministry of Planning, Planning Board, The National Development Plan, 1970-1974, Baghdad, April 1970, pp. 136-137.

2 Ibid., p. 135.

3 Shawadran, Benjamin, "Power Struggle in Iraq", Middle Eastern Affairs, Vol. XI, No. 2, February 1960, p. 39.

Public ownership was intended to tackle the concentration of capital in the private sector[1] and "to bring about an equitable distribution of income among the working population, to reduce the increasing class differentials which characterize Iraqi society".[2]

In the latest Plan of 1976-1980 a major priority is "to provide for the real application of the party's view - the Arab Baa'th Socialist Party - by the redistribution of income in order to treat with justice the lower income groups.[3]

Though the importance of the subject of income distribution has long been recognized, a measureable indicator of the degree of inequality was required on which policies and targets could be based and measures evaluated. It is clear, however, that this study is only a start and that further work is necessary if more detailed data are to be available for analysis.

Although this study is chiefly of a statistical nature it also includes an economic analysis of the effects of income distribution. Various sorts of measures of income inequality have been presented and

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1 The distribution of ownership of the industries (including the industrial Bank) that were nationalized was: 2 per cent of share-holders owned more than 58 per cent of total shares, 72 per cent owned only 6 per cent of total shares. In the Banks, 82 per cent of share holders owned 16 per cent and only 4 per cent of share holders possessed more than 55 per cent (these figures exclude foreign investment in the banks). See Al-Hafiz, S., Public Sector and Socialist Perspectives in Iraq, Dar Al-Farabi, Beirut, 1971, p. 102.

2 The Economic Establishment , The Socialist Laws, Al-Awkat Press, Baghdad, 1965, p. 1.

3 Ministry of Planning, National Development Plan, 1976-1980, Baghdad, Dar Al-Jamahir Press, 1977, pp. 6-7.

estimated, and the interrelations between these measures have been tested. This can be used for inter-regional or inter-governorate comparisons.

Some of the important distributional questions that arose in this study were: What is the degree of income inequality in Iraq as a whole and its urban-rural areas? If there is a concentration of income what does this mean in terms of inter-governorate differentials? Are the Northern governorates suffering from more widespread poverty than those in the South?

B Plan of the Study

The study is divided into eight chapters. A brief introduction to the Iraq economy during the 1964-1971 period has been included in the Second Chapter. Considerable emphasis has been placed on the growth and regional distribution of population and manpower. The economic structure, its change and growth during the period, the role of the public sector in the economy and in capital formation are also presented in this Chapter. Finally, Chapter II considers the share of wages in national income and the real average wage of selected income groups.

Chapter III covers the regional distribution of economic activity in 1971. An estimation of the 1971 regional accounts by the commodity producing sectors is provided, per capita income, productivity

on a governorate level. The regional changes in the structure of production over the 1956-1971 period are also studied. Regional value added in the industrial and agricultural sector and the regional distribution of educational and health services are covered in detail.

An attempt to estimate the distribution of income prior to 1971 is made in Chapter IV. There is a brief description of the coverage and sampling of the 1954, 1961 and 1968 household budget and income surveys and the size distribution of income in these years is presented. From these results calculations were made for the degree of income inequality and a comparison is made with the 1971 results.

The overall 1971 distribution of income in Iraq is the main concern of Chapter V. It presents a brief introduction on the sampling and coverage of the Household Budget Survey of 1971, the concept of income and other statistical and conceptual problems. A reconciliation of this study's estimate of personal income with that of the National Accounts Department is made. The remaining sections cover the results for the distribution of income in Iraq by household, by individuals and by socio-economic groups. The latter consists of occupational categories and the work status breakdown between agricultural and non-agricultural sectors is analysed in these terms. The urban-rural distribution of income is assessed on the same classification used in considering the overall distribution. The most common measures of income inequality used are the Gini ratio of concentration and the income shares of different income groups.

Chapter VI deals with the regional distribution of income. A comparison between the Northern, Central and Southern regions

distribution of income and their degree of income inequality is made. Then on a governorate level the distribution of income, the extent of inequality and disparity between the level of per household income are calculated.

Chapter VII presents an analysis of the distribution for the rural and urban areas and for the country as a whole. The 16 governorates of Iraq were the frame of the empirical analysis. A multiple regression technique is used in the context of a cross-sectional analysis. The relationship between the different income groups and the Gini ratios of concentration of the three areas and various socio-economic factors are examined. Four major issues are dealt with: the Kuznets hypothesis, economic structure and growth, population growth and education. An evaluation and a summary of the results are provided.

The final Chapter (VIII) summarises the main results of this study.

The Statistical Appendix contains some of the original data that are used as well as the detailed distribution of income by size for each governorate by their urban-rural areas, and the combined urban and rural areas. The Appendix also presents the methods used and the sources of the data used in the estimation of the regional accounts. International comparison in terms of income inequality between Iraq and some of the oil producing countries have also been included. Thus there are four Appendices numbered alphabetically from A to D. Tables in the Appendices carry a serial number and the letter of the Appendix to which they belong. Table (B.1) in the Appendix refers

to Table 1 in Appendix B. Tables in the text carry a serial number only (such as Table (3.10) which refers to Table 10 of Chapter 3).

C H A P T E R I I

Introduction to the Iraqi Economy

This chapter will present, in brief, the main features of the Iraqi economy and its development in the period 1964-1971. In the course of the study, reference is also made to data relating to the 1972-1974 period.

The emphasis will be on those socio-economic activities that relate to the size distribution of income nationally and regionally.

The chapter will cover the following areas:

A Population and Manpower

B Economic Growth and Structure

C Public Sector

D Wages and Income Distribution

A Population and Manpower

A 1 Population

The rate of growth of the population in Iraq is amongst the highest in the world[1], the annual rate of growth was 3.2 per cent during the period 1957-1977. The 1977 population census found that the population stood at 12.1 million.

Table (2.1) shows the Iraqi population and the rates of growth in selected years. The 3.2 per cent figure has tended to be accepted as the most plausible estimate of the population growth rate[2], given an increasing birth rate and the lower infant and general mortality rates that resulted from the increase in government expenditure on health and social welfare services.

Table (2.2) shows the distribution of the population and of households in the regional and national totals by governorates, the density per square kilometer and the growth rate during the 1957-1970 period. The Central region can be seen to have only slightly less than half the total population and the highest population growth rate.

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1 UN, 1976 Statistical Yearbook, New York, 1977, pp. 67-73 (for example: Venezuela (2.9%), Honduras (3.9%), Mexico (3.5%), Algeria (3.2%), Uganda (3.3%).

2 Doubts about the higher estimated rate during the mid 60's caused planners to adopt a 2% population growth rate for the Five-Year Plan for 1965-1969. The 1965 population census had no actual figures for the Northern region as a result of military operations. Under these circumstances the assumption was made that the characteristics of the Iraqi population did not differ greatly from those of neighbouring countries and their growth rates such as Iran (2.8%), Turkey (2.5%) and Syria (2.6%): See Ministry of Planning, The Detailed Frame of Economic Plan 1965-1969, Baghdad, p. 54, and UN, 1967 Statistical Yearbook, New York, 1968, p. 82.

Table (2.1)

Population of Iraq in Selected Years, 1957-1977

Year	Population	Rate of Growth %
1957 *	6,339,960	2.8
1965 *	8,097,230	3.0
1970	9,206,369	2.5
1971	9,749,597	-
1972	10,074,169	3.3
1973	10,412,586	3.4
1974	10,765,442	3.4
1977 *	12,029,760	3.2

Notes:

1 * Census figures. Only the 1957 and 1965 figures include Iraqis abroad. The 1971-1974 figures are estimates and exclude Iraqis abroad.

2 The 1957 rate of growth refers to the 1947-1957 period, and that of 1977 refers to the 1957-1977 period.

Sources:

1 Central Statistical Organization, Annual Abstract of Statistics, 1975, Table (2/11) p. 53.

2 Central Statistical Organization, Summary of the Preliminary results of 1970 population census, November 1972

3 Al-Thawra, No. 2834, 25 October 1977.

TABLE (2.2)
Population of Iraq, Households, Density and Rate of Growth by Governorate, 1970

Governorate	Population	Households	Percentage of Population		Percentage of Household		Area in Sq.Km.	Density per Sq.Km.	% of Area	Rate of Growth % 57-70
			REGION %	IRAQ %	REGION %	IRAQ %				
NORTHERN REGION	2494853	423211	100.0	27.1	100.0	28.7	94681	26	21.7	2.8
Dhok	243113	38969	9.7	2.6	9.2	2.6	9754	25	2.3	-
Nineveh	870699	141829	34.9	9.4	33.5	9.6	38076	23	8.7	3.0
Sulaimaniya	458627	83748	18.4	5.0	19.8	5.7	11993	38	2.7	3.1
Kirkuk	520717	87017	20.9	5.7	20.6	5.9	19543	27	4.5	2.3
Arbil	401697	71648	16.1	4.4	16.9	4.9	15315	26	3.5	3.0
CENTRAL REGION	4477673	687507	100.0	48.6	100.0	46.6	205557	22	46.8	3.7
Diala	468340	74800	10.5	5.1	10.9	5.1	15742	30	3.6	2.8
Anbar	316169	42955	7.1	3.4	6.2	2.9	137969	2	31.5	1.7
Baghdad	2470630	375316	55.2	26.8	54.6	25.4	22973	108	5.1	5.0
Babylon	509487	78340	11.3	5.5	11.4	5.3	6889	74	1.6	2.8
Kerbela	375841	59697	8.4	4.1	8.7	4.1	7170	52	1.6	4.2
Wasit	337207	56399	7.5	3.7	8.2	3.8	14814	23	3.4	1.0
SOUTHERN REGION	2233843	364664	100.0	24.3	100.0	24.7	133762	17	30.5	1.5
Qadisiya	416664	67968	18.6	4.5	18.7	4.6	9359	44	2.1	0.7
Muthanna	155305	27112	7.0	1.7	7.4	1.8	74536	2	16.9	-
Thi-Qar	541889	93783	24.3	5.9	25.7	6.4	13900	39	3.3	1.3
Maysan	367449	62088	16.4	4.0	17.0	4.2	17945	20	4.1	0.8
Basrah	752536	113713	33.7	8.2	31.2	7.7	18022	42	4.1	3.1
TOTAL IRAQI GOVERNORATES	9206369	1475382		100.0		100.0	434000	21	99.0	2.9
HALF OF THE NEUTRAL ZONE							3522		0.8	
TERRITORIAL WATERS							924		0.2	
TOTAL AREA OF IRAQ							438446		100.0	

Source: See Table 2.1

Baghdad governorate (the Capital) with its greater population share (26.8 per cent of the total Iraqi population) also had the highest growth rate (5 per cent). Clearly such a high rate includes immigrants from rural areas as well as the natural increase. Baghdad was followed by Kerbela governorate with a 4.2 per cent growth rate which can be explained in part by immigration based on religious motivation.

The Southern region had the lowest population share and a growth rate ranging between 1.3 and 0.8 per cent (excluding the Basrah governorate). This region experienced a net out-migration during the period.[1]

Table (2.2) presents data on households by governorate, and we find that the average number of persons per household is 6.2 for Iraq as a whole: 5.6 in the North, 6.1 in the South and 6.5 in the Central region.

There has been a clear decrease in the rural proportion of the population during the period 1957-1970 (Table 2.3). For example, in 1957 the rural population represented 61 per cent of the total, but declined to about 49 per cent in 1965 and to 43 per cent in 1970. The proportion of the rural population declined by 20 per cent in the South and Central regions and by 10 per cent in the Northern region. Explanations for this do not differ from those relevant to other developing countries, in most of which rapid urbanization has become common: the demand for labour from the industrial and other urban

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1 A. Najm al-Din, On the Population of Iraq, Institute of Arabic Research and Studies, Cairo, 1970, p. 114.

TABLE (2.3)
Rural-Urban Population of Iraq by Governorates in 1957, 1965 and 1970

(Number and percentages)

	1957				1965				1970			
	Rural	%	Urban	%	Rural	%	Urban	%	Rural	%	Urban	%
NORTHERN REGION	1145514	66.5	577050	33.5	1214091	57.3	904197	42.7	1423590	57.1	1071263	42.9
Dhok	-		-		94083	64.5	51751	35.5	189886	78.1	53227	21.9
Nineveh	483876	64.1	271571	35.9	384151	51.7	358616	48.3	441916	50.8	428783	49.2
Sulaimaniya	225260	73.9	79635	26.1	272036	68.1	127732	31.9	283699	61.9	174928	38.1
Kirkuk	236052	60.7	152787	39.3	241679	51.0	231947	49.0	256034	49.2	264683	50.8
Arbil	200326	73.3	73057	26.7	222142	62.3	134151	37.7	252055	62.7	149642	37.3
CENTRAL REGION	1420556	51.4	1343367	48.6	1499066	38.7	2373037	61.3	1401146	31.3	3076527	68.7
Diala	253609	76.9	76226	23.1	262213	66.0	135150	34.0	289140	61.7	179200	38.3
Anbar	190137	75.1	62886	24.9	184023	60.0	122989	40.0	162751	51.5	153418	48.5
Baghdad	456990	34.8	856022	65.2	448669	21.9	824584	78.1	348342	14.1	2122288	85.9
Babylon	250004	70.5	104775	29.5	283635	63.3	164533	36.7	301306	59.1	208181	40.9
Kerbela	43865	20.2	173510	79.8	89415	26.3	250439	73.7	85374	22.7	290467	77.3
Wasit	225951	76.4	69948	23.6	231111	69.1	103220	30.9	214233	63.5	122973	36.5
SOUTHERN REGION	1287447	71.0	525041	29.0	1221967	59.4	835057	40.6	1134359	50.8	1099484	49.2
Qadisiya	400821	77.0	119649	23.0	269529	67.4	130563	32.6	260535	62.5	156129	37.5
Muthanna	-		-		91839	64.2	51297	35.8	95601	61.6	59704	38.4
Thi-Qar	373244	81.3	85604	18.7	365533	73.3	133317	26.7	358255	66.1	183634	33.9
Maysan	246257	74.7	83583	25.3	241335	69.9	104132	30.1	240276	65.4	127173	34.6
Basrah	267125	53.1	236205	46.9	253731	37.9	415748	62.1	179692	23.9	572844	76.1
ALL GOVERNORATES	3853517	61.2	2445458	38.8	3935124	48.9	4112291	51.1	3959095	43.0	5247274	57.0

Source: See Table 2.1

located sectors, the development of health and social facilities, and in rural areas, land problems and declining real income.[1]

During this period one important change in the age structure of the population was the increase in the proportion under 20 years: from 53 per cent in 1957 to 56 per cent in 1965 and to 58.4 per cent in 1971.[2]

A 2 Manpower

The size of the active population in Iraq (defined as those in the 15-59 age range)[3] is estimated as having been 3,653 and 4,546 million persons in 1965 and 1971 respectively.[4] This represents an average of 46 per cent of the total population over these two years. It has been estimated in many studies[5] that the labour force constituted 24 per cent of the total population in 1965 and rose to 28.3 per cent in 1971. Table (2.4) shows the size of the gainfully employed population from 1964 to 1971 and its distribution and growth rate by major economic sectors. It reveals that the total employed as a proportion of the

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1 A. Najm al-Din, Ibid., pp. 122-124.

2 Central Statistical Organization, Annual Abstract of Statistics, 1973, Table 17, p. 52.

3 R.I. Lawless, "Iraq: Changing Population Patterns", in J.I. Clarke & W.B. Fisher (editors), Populations of the Middle East and North Africa, University of London Press, 1972, p. 99.

4 These figures were calculated from: Central Statistical Organization, Annual Abstract of Statistics, 1973, Table 12, p. 45 and Table 17, p. 52.

5 See a) Hasan, M.S., Studies in the Iraqi Economy, Dar al-Talia', Beirut, 1966, p. 191 (in Arabic), and b) UN. UNDP., The Economic Status of Iraq, Baghdad, 1968, p. 87.

TABLE (2.4)
Gainfully Employed Population by Economic Sectors, 1964-1971

(numbers)

SECTOR	1964	%	1965	%	1966	%	1967	%	1968	%	1969	%	1970	%	1971	%	Rate of growth 1964-71 %
Agriculture	920100	50.2	1009600	51.3	1103100	52.9	1177400	53.8	1253600	54.4	1306400	54.5	1385700	55.3	1434700	55.1	6.5
Oil	11359	0.6	11128	0.6	11021	0.5	10910	0.5	8527	0.4	8367	0.3	8821	0.3	8682	0.3	-3.9
Manufacturing industry	115643	6.3	120986	6.2	122891	5.9	133792	6.1	132480	5.8	143714	6.0	154064	6.2	171390	6.6	5.8
Electricity	9990	0.5	.0691	0.5	11212	0.5	11551	0.5	11774	0.5	13332	0.6	13927	0.6	15218	0.6	6.2
Construction	47198	2.6	61132	3.1	70029	3.4	59138	2.7	66154	2.9	71316	3.0	67520	2.7	72787	2.8	6.4
Transport	125000	6.8	129000	6.6	133000	6.4	137000	6.3	140000	6.1	143000	6.0	150000	6.0	154000	5.9	3.0
Commerce	120000	6.5	125000	6.3	130000	6.2	135000	6.2	140000	6.1	145000	6.1	150000	6.0	155000	6.0	3.7
Services	265000	14.5	270000	13.7	275000	13.2	285000	13.0	290000	12.6	295000	12.3	300000	11.9	310000	12.0	2.3
Others	220000	12.0	230000	11.7	230000	11.0	240000	10.9	260000	11.2	270000	11.2	275000	11.0	280000	10.7	3.5
TOTAL	1834290	100.0	1967537	100.0	2086253	100.0	2189791	100.0	2302535	100.0	2396129	100.0	2505032	100.0	2601817	100.0	5.1

Source: 1) The figures other than those of Oil, Industry, Electricity and Construction sectors are from: Central Statistical Organization Annual Abstract of Statistics, 1973, Table 208, p.358.
2) Central Statistical Organization, Statistical Pocket Book, 1960-1970, Baghdad, 1972, Tables 41 and 61, pp.100-3, and p.163.
3) Central Statistical Organization, Annual Abstract of Statistics, 1973, Tables 97 and 280, pp. 168 and 446.

population has increased from 24.3 per cent in 1965 to 26.7 per cent in 1971, a 4.7 per cent rate of growth.

For the agricultural sector, it seems that there is a considerable difference between the estimated figures - as in the Table - and those of the 1971 agricultural census.[1] The estimated number of persons engaged in agricultural activities is one third less than those reported in the 1971 census. Despite this, no substantial shift in agricultural employment can be observed. Half of the total employed are concentrated in this sector, and during the 1964-1971 period it increased its share of the employed population to 55 per cent.

The manufacturing industry is the second most important labour absorbing sector: though its share of employed population has not increased substantially (6.3 per cent - 6.6 per cent from 1964 to 1971), it has been growing at 5.8 per cent and 6.2 per cent in the electricity and water sectors. Since these sectors are located in urban areas almost exclusively, they are absorbing labour at a relatively higher rate in comparison with the growth of the urban population (5 per cent over the period, see Table (2.3)). The commodity producing sector's employment as a whole grew at 6.4 per cent and since this is greater than the labour force growth rate (of 4.4 per cent over the period 1964-1971)[2], it suggests that this sector absorbed more of the new entrants to the labour force than did the services sector.

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1 Central Statistical Organization, Results of 1971 Census of Agriculture, Part I, Baghdad, December 1973, Table 39, p. 131.

2 Calculated from: Central Statistical Organization, Annual ... 1973, op. cit., Table 208, p. 358.

The unemployed population is simply the difference between the labour force and the gainfully employed. This was estimated at nearly 9.5 per cent of the total labour force in 1964 but declined to only 6 per cent in 1971. The problem of underemployment still remains, however, in the agricultural and services sectors.[1]

In May 1972, the Central Statistical Organization carried out a comprehensive survey of the personnel in government bodies.[2] It covered all officials, employees and labourers.[3] The results of the survey indicated that the number of personnel employed by the State was 385,978 persons of which 87.5 per cent were male. The number of persons with higher education (such as those with Bachelors and Masters degrees and Doctorates) working in government bodies came to 11.6 per cent. About a quarter of all government personnel were illiterate.

There are no statistical data on the distribution of employees by each governorate for the distributive and services sectors. However, this study will provide data for the commodity producing sectors by governorate and region. Table (2.5) shows the number of workers employed in commodity sectors in 1971. For agricultural and manufacturing, information is also given on paid and unpaid labour. In the case of manufacturing, a further breakdown is according to size of establishment.

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1 Central Statistical Organization, Annual ... 1973, op. cit., p. 358.

2 Central Statistical Organization, The Results of 1972 Personnel in Government Bodies Survey, Part I, May 1972.

3 Excluding the President and members of the revolutionary command council, the ministers and all the armed forces.

TABLE(2.5)
Distribution of Employed Workers in the Commodity Sectors by Governorates, 1971

GOVERNORATES	AGRICULTURE				CRUDE OIL		MANUFACTURING INDUSTRY						ELECTRICITY		CONSTRUCTION		TOTAL	
	Paid Workers	Holders & unpaid	Total Number	%	Number	%	LARGE ESTB. Paid	LARGE ESTB. Unpaid	SMALL ESTB. Paid	SMALL ESTB. Unpaid	Total Number	%	Number	%	Number	%	Number	%
NORTHERN REGION	140111	609226	749337	35.5	5903	68.0	12241	47	6393	8849	27530	16.1	2707	17.7	14521	19.9	799998	33.6
Dhok	7716	59070	66786	3.2	0	0	0	0	89	201	290	0.2	89	0.6	1182	1.6	68347	2.9
Nineveh	76097	211093	287190	13.6	484	5.6	7577	28	2382	3368	13355	7.8	957	6.2	6051	8.3	308037	12.9
Sulaimaniya	17087	149423	166510	7.9	0	0	2230	10	1165	1419	4824	2.8	358	2.3	1968	2.7	173660	7.3
Kirkuk	19758	98841	118599	5.6	5419	62.4	1574	5	1737	2365	5681	3.3	942	6.2	2434	3.3	133075	5.6
Arbil	19453	90799	110252	5.2	0	0	860	4	1020	1496	3380	2.0	361	2.4	2886	4.0	116879	4.9
CENTRAL REGION	88981	671636	760617	36.0	283	3.3	76188	595	17242	23802	117827	68.7	10124	66.1	44424	61.1	933275	39.2
Diala	28553	117121	145674	6.9	0	0	1753	13	883	1240	3889	2.3	299	1.9	2541	3.5	152403	6.4
Anbar	3651	75301	78952	3.7	0	0	1098		363	829	2290	1.3	244	1.6	1333	1.8	82819	3.5
Baghdad	24648	166256	190904	9.0	283	3.3	60148	504	10207	15024	85883	50.1	8484	55.4	34353	47.2	319907	13.4
Babylon	10856	162890	173746	8.2	0	0	7527	26	1518	1823	10894	6.3	400	2.6	2258	3.1	187298	7.9
Kerbela	13003	45214	58217	2.8	0	0	2271	49	3750	3970	10040	5.9	452	3.0	2428	3.4	71137	3.0
Wasit	8270	104854	113124	5.4	0	0	3391	3	521	916	4831	2.8	245	1.6	1511	2.1	119711	5.0
SOUTHERN REGION	47045	553594	600639	28.5	2496	28.7	14751	87	4293	6902	26033	15.2	2482	16.2	13842	19.0	645492	27.2
Qadisiya	19188	82180	101368	4.8	0	0	728	5	661	1116	2510	1.5	190	1.2	1240	1.7	105308	4.4
Muthanna	794	41244	42038	2.0	0	0	1089	1	278	453	1821	1.1	186	1.2	403	0.6	44448	1.9
Thi-Qar	5427	199915	205342	9.7	0	0	668	7	720	1237	2632	1.5	194	1.3	2207	3.0	210375	8.9
Maysan	7219	114191	121410	5.8	0	0	3795	21	659	1079	5554	3.2	190	1.2	1130	1.5	128284	5.4
Basrah	14417	116064	130481	6.2	2469	28.7	8471	53	1975	3017	13516	7.9	1722	11.3	8862	12.2	157077	6.6
ALL GOVERNORATES	276137	1834456	2110593	100.0	8682	100.0	103180	729	27928	39553	171390	100.0	15313	100.0	72787	100.0	2378765	100.0

Source: 1) Central Statistical Organization, Results of 1971 Census of Agriculture, Part I, December 1973, Table 39, p.131.
2) Central Statistical Organization, The Annual Results of Industrial Statistics of Large-scale Establishments, 1971, Baghdad, 1972.
3) Central Statistical Organization, The Annual Results of Industrial Statistics of Small-scale Establishments, 1971, Baghdad, 1972.
4) Central Statistical Organization, The Construction Statistics of 1971, Baghdad, 1972.

The Table shows that more than one third of the labour employed is concentrated in three governorates: Baghdad, Nineveh and Thi-Qar. Regionally, the Central governorates account for approximately two-fifths of total employment, followed by the Northern governorates with a third of the total.

In the non-agricultural sectors, the regional distribution of employment is highly concentrated. Baghdad accounts for over 50 per cent of the employment in manufacturing and electricity, and nearly 50 per cent in construction. In the case of oil[1], Kirkuk governorate has over 60 per cent of the labour employed.

Within the manufacturing sector, over 60 per cent of the labour employed was in small scale industries. However, in the Central region the corresponding percentage was only 35 per cent.

The agricultural sector accounted for nearly 80 per cent of total employment in the commodity sectors. Regionally, 5 governorates out of 16 (Nineveh, Thi-Qar, Baghdad, Babylon and Sulaimaniya) account for more than 50 per cent of agricultural employment. Only a small proportion (about 13 per cent) of this sector's employment was wage labour.

The pattern of agricultural employment follows the geographical availability of natural resources such as arable land and water. Oil sector employment is also geographically determined. In the case of

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1 In Baghdad which has no oil production, the figures for employment refer to the management headquarters location.

industry, however, geographical concentration of employment can best be understood in terms of such factors as cost minimization, market location, infrastructural provision and availability of skilled labour, etc.

Finally, it would seem that the entire commodity sector employment is unevenly distributed between the three regions. However, within each region there exists a concentration of employment in one governorate: in the Northern region Nineveh accounts for 38.5 per cent of the region's employment, Baghdad 34.3 per cent in the Central Region and Thi-Qar for 33 per cent in the Southern region.

B Economic Structure and Growth

Iraqi economic performance has not been characterized by very high growth rates or dramatic structural change despite its rich oil endowment, land fertility and water resources. It achieved a moderate annual rate of growth in GNP of 5.7 per cent during the 1964-1971 period - at 1964 prices - (see Table (2.6) which shows the GNP structure and the growth rate). Over the same period, the per capita net national income grew in real terms, by 2.6 per cent annually, from ID. 81.3 to ID. 98.3.[1]

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1 Central Statistical Organization, The National Income in Iraq, 1964-1971, Baghdad, 1973, Table 5, p. 43. In 1974, it was estimated that the GDP per capita reached ID. 139.5 - at 1969 prices - see Annual Abstract of Statistics, 1976, Table 6/3, p. 177.

Table (2.6)

Gross National Product by Industrial Origin, 1964-1971

(at 1964 prices) (percentage)

	1964	1965	1966	1967	1968	1969	1970	1971	Rate of Growth 1964-71
Agriculture	19.7	20.4	19.3	20.7	20.5	19.6	18.7	15.0	2.0*
Mining:	40.7	38.7	39.1	34.3	38.2	37.0	37.3	37.8	4.7
Crude Oil	40.1	38.0	38.4	33.6	37.4	36.1	36.4	36.3	4.3
Others	0.6	0.7	0.7	0.7	0.8	0.9	0.9	1.5	20.1
Manufacturing Industry	9.4	9.4	9.5	10.5	10.5	10.9	11.3	12.3	9.9
Construction	4.0	4.1	4.2	3.8	3.7	3.6	3.5	3.8	5.4
Electricity	1.7	1.6	1.6	1.6	1.7	1.9	1.9	1.9	8.1
Commodity Sectors	75.5	74.2	73.7	70.9	74.6	73.0	72.7	70.8	4.8
Transport	6.7	8.0	8.2	8.0	7.1	7.0	6.8	7.8	7.9
Trade	9.2	9.7	9.9	9.9	10.1	9.8	9.7	8.9	5.4
Banking	1.2	1.3	1.6	1.5	1.4	1.5	1.7	1.6	10.6
Distributive Sectors	17.1	19.0	19.7	19.4	18.6	18.3	18.2	18.3	6.9
Ownership of Dwellings	4.3	4.1	4.0	4.1	3.8	3.7	3.7	3.5	2.8
Public Administration	12.6	12.1	12.1	12.5	12.0	13.0	13.2	13.6	6.9
Services	8.0	8.1	8.3	8.6	8.5	8.6	8.8	9.2	8.1
Services Sectors	24.9	24.3	24.4	25.2	24.3	25.3	25.7	26.3	6.6
Gross Domestic Product	117.5	117.5	117.8	115.5	117.5	116.6	116.6	115.4	5.5
Net Factors ** Income Abroad	17.5	17.5	17.8	15.5	17.5	16.6	16.6	15.4	3.9
Gross National Product	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	5.7

* Average of two years
** Net Factor Income to Abroad (-)

Source: Calculated from Central Statistical Organization, National Income in Iraq 1964-1971, Baghdad, 1973, Table 2, pp. 33-34.

Though Iraq remains an agricultural economy in terms of employment, and despite the successive policies of diversification, it is still dominated by the oil sector. Oil value added constituted 36.3 per cent of GNP in 1971. About 80 per cent and 90 per cent of ordinary and development budgets respectively were financed from oil revenues during the 1969-1972 period.[1]

The dependence of the economy on foreign trade is also clear, as total commodity exports accounted for more than one third of GNP, and oil exports accounted for nearly 95 per cent of total exports during the 1969-1972 period.[2] It was the increasing oil revenue during this period that provided the foreign exchange to finance the increasing import bill. Most of the capital and intermediate goods required for development projects are imported. The share of imports in consumption goods has also been increasing. Consumption goods accounted for one third of annual imports on average over the period 1970-1972.[3]

As shown in Table (2.6) changes in the structure of production were insignificant. Manufacturing industry, despite its high rate of growth (slightly less than 10 per cent) is still only contributing 12.3 per cent of GNP. Agriculture, lagging behind the rest of the economy, grew at an average of 2 per cent and represents a declining

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1 Central Bank of Iraq Bulletin, New Series No. 1, January-March 1974, Tables 14 and 17, p. 25 and p. 28.

2 Central Bank ..., ibid., Table 36, p. 66.

3 Central Bank ..., ibid., Table 33, pp. 61-63.

share in GNP. The distributive and services sectors combined grew faster than the commodity sectors.

The experience of a quarter of a century of planning has led to the formulation of very ambitious general objectives: diversification, modern industry, less dependence on oil, economic and social equality. There is, however, no short cut to escape from heavy reliance on oil revenue and it has been argued that "oil revenues are nothing more nor less than the power to purchase foreign goods and services; they cannot buy 'development' like a commodity".[1]

There have been many factors restraining the development process in Iraq. These include: the inadequacies in plan implementation, the absence of coordination between fiscal, monetary and trade policies, the lack of efficient organization and management, the shortage of technical and skilled labour, inaccuracy in statistical data on the economy, etc.[2]

The latest national development Plan of 1976-1980, with its huge oil resources and more ambitious objectives, seems to have identified most of these problems, which are considered to be serious obstacles to

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1 Penrose, E. and E.F., Iraq: International Relations and National Development, Ernest Benn, London, 1978, pp. 479-480.

2 Further and detailed discussion on the planning problems in Iraq can be seen in a) Penrose, E. and E.F., ibid., pp. 476-488 and b) Khair al-Din Haseeb, "Plan implementation in Iraq, 1951-67" in Studies on Selected Development Problems in Various Countries in the Middle East, 1969, (UN).

further development.[1] Any significant increase in allocative efficiency in the spending of the country's resources would give an important boost to the development effort.

C The Public Sector

The Iraqi government is the channel through which the oil revenues are fed into the economy. Thus the pattern by which these revenues are distributed will have a crucial impact on development and on the distribution of income. The government divides the oil revenues between the ordinary and investment budgets in varying proportions. In 1970/1971 there was a 51 per cent allocation to the ordinary budget.

The government's consumption expenditure - through the ordinary budget - accounted for nearly one quarter of GNP during the period 1964-1971 and it was growing at an annual rate of 8.8 per cent throughout the period.[2] In 1971, nearly one third of total government expenditure was allocated to education and health services as a part of government social policy.[3]

Understanding the importance of the public sector in the economy requires a consideration of certain crucial decisions that have influenced

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1 Ministry of Planning, National... , op. cit., p. 66.

2 See Appendix A, Table (A.1).

3 The total expenditure on education and health services was ID. 95 million in 1971, see p. 89.

the expansion of this sector. After the 1958 revolution the government signed technical and economic agreements with the Eastern European countries and especially with the Soviet Union. The 1959 agreement with the Soviet Union included a ID. 65.2 million loan for an allocation to a variety of industrial and other public projects that were included in the 1959-1963 Provisional Plan.[1]

In 1961, Law No. 80 was announced, expropriating most of the IPC concession area. It was followed by the establishment of a national oil company. The 0.5 per cent of the concession area left to IPC however, included all the actually productive oil fields.

The 1964 nationalization of the 30 largest industrial establishments and all the banks and insurance companies was an important step in the expansion of the public sector.[2] But the major decision was in 1972 when the IPC was nationalized ending the dominance of the major foreign company in Iraq.

These measures, in addition to the continuing flow of government investment to other branches of the economy, gave the public sector an influential role in the development process. The national plans emphasise the importance of the productive commodity sectors, but with changing priorities for industrial and agricultural projects.

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1 Ministry of Planning, Provisional Economic Plan, 1959-1963, Baghdad, 1960.

2 The overall value of capital assets of the industrial companies is estimated at ID. 26 million. See Al-Hafiz, S., Public Sector ..., op. cit., p. 81.

The overall picture of the relative importance of the public sector in GNP and gross capital formation during 1964-1972 is shown in Table (2.7). It is evident that the contribution of the public sector to GNP has tended to increase over this period: its growth is much higher than that of the private sector. In 1972 the public sector accounted for slightly less than two-fifths of the GNP.

Public investment constituted more than one half of gross capital formation in Iraq over the same period. In relation to the public sector's share in income, this suggests that a higher capital/output ratio characterizes public investment.[1]

Furthermore, since most capital goods are imported, and with government policy being to control foreign trade, public sector imports increased to double their 1969 share (of 44 per cent) to 88.9 per cent of total imports in 1974.[2]

In addition, the private investor looks to public sector institutions for loans, whether it be for private housing, agricultural credit, industrial credit or for participation in partly state-owned industrial projects.

Hence, the public sector seems to have consolidated its position

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1 See Hasan, M.S., "The Characteristics of the Public Sector in Iraq" in Working paper presented at a seminar on The Public Sector in the Arab World in the Arabic Institute for Planning, Kuwait, 23 March 1976, Table 1, p. 10 and Table 3, p. 15.

2 Central Statistical Organization, Annual Abstract of Statistics, 1975, Table 8/6, p. 224.

Table (2.7)

Share of Public Sector in G.N P and Capital Formation 1964-1972

(percentage)

Year	Share of Public Sector in	
	G N P	Gross Capital Formation
1964	26.5	55.2
1965	28.0	55.0
1966	28.2	51.4
1967	28.3	56.5
1968	28.3	53.3
1969	29.7	50.0
1970	30.4	54.7
1971	30.4	53.3
1972	38.6	53.0

Source:

1 Central Statistical Organization, National Income in Iraq, 1964-1971, Baghdad, 1973, Table 4, pp. 36-43.

2 Hashim, J., Gross Fixed Capital Formation in Iraq, 1957-1970, October 1972, Baghdad, Table 4, p. 6.

3 Central Statistical Organization, Gross Fixed Capital Formation in Iraq, 1970-1974, April 1975, Table 2, p. 11.

in most economic activities. The absence of regional planning or other distributive criteria has led to the greatest share of public industrial investment being concentrated in the major urban centres. This has contributed to the geographical imbalance.[1]

D Wages and Income Distribution, 1964-1971

This section is concerned with the movement and pattern of income distribution with respect to the wage share in national income. We will also consider the average income of certain social groups within the wage-earning sector to show which groups benefitted from the moderate growth rate achieved during the period 1964-1971.

D 1 Wage Share in the National Economy

'Wage share' is defined here as the proportion of the national income accruing to wage and salary earners. Naturally, this forms the major part of personal income in most countries. We must be clear at the beginning that the wage share differs from the labour share in the sense that the latter includes all remuneration for work, whether by wage-earners or by self-employed.

Table (2.8) shows, the wage share in national income, in GDP, in the value added of the three major sectors and the growth rates (at current prices) of wages during 1964-1971.

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1 See Mehdi , F. Abbas, Economic Development and Planning in Iraq, 1960-1970, Dar Al-Talia', Beirut, September 1977, p. 104 (in Arabic).

TABLE (2.8)
Share of Wages in National Income, GDP and Other Sectors 1964-1971

"%"

	Share of Wages %				Wage Share in Sectors %		
	National Income	GDP	GDP, excluding Agriculture & Dwellings sectors	GDP, excluding Oil, Agriculture & Dwellings Sectors	Commodity	Distributive	Services
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1964	34.6	27.3	34.6	59.4	12.7	39.9	89.6
1965	35.2	27.8	35.6	59.1	13.7	40.0	90.0
1966	34.9	27.7	35.6	58.8	13.7	40.0	89.8
1967	35.3	28.5	37.5	58.2	14.5	41.2	89.5
1968	33.7	26.8	34.6	57.0	13.4	41.5	85.8
1969	33.9	27.1	34.7	55.8	13.0	41.6	83.7
1970	33.9	27.2	34.9	56.1	13.8	41.3	83.6
1971	34.0	26.9	32.6	57.9	11.6	41.5	88.8
1964-1971 Growth Rate in Total Wages	8.4	8.3	9.0	8.6	7.6	8.8	7.7

Source: The calculation was made on data from: 1) Central Statistical Organization, The National Income in Iraq, 1964-1971, Dec.1973 (Arabic); 2) Ministry of Planning, "Progress under Development, 1974", Table 8, p.78; 3) See Appendix A, Table A.2.

The wage share accounts for slightly more than one third of national income, and there is some indication of a decline in recent years.[1] This share "tends to increase in economic development together with the increase in the proportion of wage earners in the active population".[2]

The overall wage share in GDP appears fairly stable at around 27 per cent over the period. However, a perceptible decline (of one or two percentage points) is noticeable when the total value added of the agriculture sector and the rental value of dwellings are excluded.[3] (Columns 2 & 3 of Table 2.8)

The wage share in the oil sector is very low (it accounted for 2.5 per cent in 1964 and fell to 1.8 per cent in 1971). Thus excluding the whole of gross value added in this sector (in addition to gross value added in the agriculture and dwellings sectors (column 4)) does not change the degree of decline in the wage share greatly.

However, it must be borne in mind that it is the distribution of oil revenues (36 per cent of GNP in 1971) that has the major impact on overall distribution of incomes, particularly as oil company profits

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1 The decline in the wage share was even more marked in 1974, when it accounted for nearly 20.6% of national income. (For wages data see: D.A. Rizik, Inflation in Iraqi Economy 1965-1974, Study No. 1, January 1975, Table 19, p. 123 (in Arabic). The national income figure for 1974 from Central Statistical Organization, Statistical Pocket Book, 1976, p. 17.

2 Lecaillon, J. & Germidis, D., "Economic Development and the Wage Share in National Income" in International Labour Review, Vol. 4, May 1975, pp. 393-409.

3 These are excluded since there is no breakdown of total value added in these sectors into factor shares.

are subject to transfer abroad.

The expansion of the high wage share public administrative sector[1] appears to have been offset by the expansion of the low wage share oil sector, leaving the overall wage share in GDP fairly constant at around 27 per cent.[2]

D 2 Average Real Wages in Selected Sectors

Table (2.9) shows the average real wage per employee in large and small scale manufacturing industries, the oil sector and government administrative bodies. The average "income" per pensioner[3] and per capita income are also included together with the annual rates of growth and the index numbers during the 1964-1971 period.

With the exception of pensioners, the averages for all groups had a slower rate of increase than the growth rate of per capita income. The rate of increase for each group was different and that of the pensioners was negative in real terms. The moderate growth performance of the economy was not fully reflected in the standard of living of employees and was of no benefit to pensioners whose position worsened.

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1 The number of government personnel increased from 279,432 persons in 1964 to 385,978 in 1972. See Central Statistical Organizatien, Annual Abstract of Statistics, 1973, p. 402.

2 See Appendix A, Table (A. 2).

3 A pension per se is not considered as income, in the sense that it is not a result of a contribution to the creation of the national income. As a transfer payment it is included in the definition of personal income adopted by this study (see p. 119).

Table (2.9)

The Real Average Earnings for Selected Social Groups and Per Capita Income, 1964-1971

(ID.)

Year	Average Wage per Worker in				Average "income" per Pensioner	Per Capita Income
	Oil Sector	Manufacturing Industry		Government Bodies		
		Large Scale	Small Scale			
1964	703.4	265.9	162.1	337.4	189.3	81.3
1965	729.7	272.3	181.6	341.5	199.8	86.5
1966	722.2	267.8	181.7	358.4	197.1	88.4
1967	720.2	272.3	177.9	363.0	203.6	86.1
1968	832.0	281.1	187.6	373.5	196.9	93.3
1969	752.1	279.7	164.7	370.1	199.0	93.7
1970	755.6	274.4	189.3	-	206.3	94.8
1971	790.5	273.3	174.0	378.3	174.0	98.3
Rate of Growth	1.7	0.4	1.0	1.6	(-) 1.2	2.7
	INDEX NUMBERS : (1964 = 100)					
1964	100.0	100.0	100.0	100.0	100.0	100.0
1965	103.7	102.4	112.0	101.2	105.5	106.4
1966	102.7	100.7	112.1	106.2	104.1	108.7
1967	102.4	102.4	109.7	107.6	107.6	105.9
1968	118.3	105.7	115.7	110.7	104.0	114.8
1969	106.9	105.2	101.6	109.7	105.1	115.2
1970	107.4	103.2	116.8	-	109.0	116.6
1971	112.4	102.8	107.3	112.1	91.9	120.9

Note and Source: The original data for the average wage, pension and per capita income (before deflation by the consumer price index are shown with the method and sources in Appendix (A) Table (A.3).

As might be expected, the average wage in the oil sector was higher and was growing faster than that of all other groups. It stood at ID. 790.5 in 1971, nearly 8 times higher than per capita income and 3 times higher than that of large scale industrial workers. The number employed in this sector is, of course, very small.

Of the remainder, government employees benefit most as a group. Their wage and salary bill (including health and education) accounted for 15 per cent of the national income in 1972.[1] This is partly explained by the growing importance of this sector as a proportion of the total employed population, but average income within it must be adjusted for the many fringe benefits that exist.

Taking the average wage per worker as a relevant indicator of workers' welfare, and the average number of persons per wage earner household as 7.1 persons[2], and assuming two wage earners per household, a per capita income emerges of I.D. 77 and I D. 49 for large and small scale industrial workers respectively. In other words the national per capita income in 1971 is higher by 21.7 per cent and 50.2 per cent of these latter averages respectively.

A number of factors suggest that the distribution of income is highly unequal and became more unequal during the period studied. First, there is the fact that industrial establishments and government bodies

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1 See sources in Table (A.3) and the national income figure from Central Statistical Organization, Annual Abstract of Statistics, 1976, p. 175.

2 See p. 142.

are mostly located in urban areas, from which one may conclude that there exists an urban-rural income disparity. Second there is the evidence from a previous section that wages constitute a declining proportion of the national income. Third, there are the results from the preceding section which show that significant inter-group wage differentials exist.

The limited nature of the evidence on which such a conclusion is drawn demands further investigation. This is done in subsequent chapters by examining the overall size distribution of income.

CHAPTER III

Regional Distribution of Economic Activity

This chapter deals with the geographical distribution of economic and social activities, and, in particular, with the distribution of per capita income, labour productivity and of growth rate.

The 1971 data have been used to estimate the contribution of each individual governorate to the national product, broken down by commodity producing sectors. The methodology, coverage and the sources of data are presented in Appendix (B) which also provides a detailed comparison of these findings with those of Haseeb's 1956 estimates.[1]

The distribution of the agricultural and industrial sectors by governorates, will be presented in detail. Government expenditure on education and health will also be discussed at length, since these factors influence the level of income in each governorate.

The findings of this chapter are used in conjunction with the results of the income distribution study in Chapter VII.

The chapter starts with a strict definition of such concepts as the "region" and a description of the statistical problems.

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1 Haseeb, Khair al-Din, The National Income of Iraq, 1953-1961, London, Oxford University Press, 1964.

It is divided into the following sections:

A Definitions and Statistical Problems

B Regional Distribution of GNP by Commodity Sectors

C Regional Distribution of Industrial Activity

D Regional Distribution of Agricultural Activity

E Regional Distribution of Education and Health Services

A Definitions and Statistical Problems

1) The data available on the major economic and social aspects of regional distribution were classified according to 16 administrative units called "Muhafada" or governorates which together comprise the administrative units in Iraq.[1] The reasons for this particular division of the country appear to have been more of an historical, political and geographical nature than social and economic: the present divisions do not satisfy certain socio-economic criteria that might be thought essential in defining a "region".[2] Two distinct areas in Iraq could be said to contain the economic "semi-integration", social homogeneity and geographical similarity which might be held to be necessary characteristics of a "region". The first is the Northern area which includes the governorates of Dhok, Nineveh, Sulaimaniya, Kirkuk and Arbil. The second is the Southern area which also has five governorates: Qadisiya, Muthanna, Thi-Qar, Maysan and Basrah.

The Central area of the country has a substantial uninhabited area the desert plateau - which extends from the Anbar governorate on the west side of the country, downward to the south west of the Muthanna governorate in the Southern area. The rest of the Central area is

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1 In 1976, two more governorates were established, one is "Salah Al-Deen" which was part of Baghdad called Tikrit, and "Najaf" which was part of Kerbela governorate. The name of Kirkuk governorate was changed to "Ta'meem" governorate.

2 The adequate definition of a "region" remains a matter of debate, various necessary and sufficient conditions being demanded by the various human disciplines (economics, sociology, demography, politics). Such a debate is outside the scope of this study.

the Euphrates/Tigris alluvial plains and the fertile areas irrigated by these rivers. The Central area includes 6 governorates as follows: Diala, Anbar, Baghdad, Babylon, Kerbela and Wasit. Each of these three areas are defined as "regions" for the purposes of this study.[1]

2) The estimation of regional GNP was determined for five major sectors: agriculture, oil, industry, electricity and construction. The distributive and service sectors were excluded. This was a limitation imposed on the study by the non-availability of statistical data for these sectors at governorate level. On the other hand, the first five sectors are those which produce material goods, while the income of the last two may be regarded as a result of the redistribution of the income of the first five. This approach coincides with that of the Material Product System (MPS).[2]

3) A comparable set of regional national accounts for Iraq, was estimated by Haseeb[3] for 1956. This estimation was on a "Net National Product" approach, i.e. the deduction of the depreciation of fixed capital in the final estimates for each governorate. This study will estimate regional accounts for 1971, using a GNP approach (Table 3.1). These estimates are later converted to a "Net" basis in order to make comparisons with those of Haseeb (Table B 1).

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1 Similar classification of the three regions was used by (UNESOB) T. Kanaan "Comments on the Importance of Regional Planning within the Framework of National Development in Iraq", pubished by the Ministry of Planning, Regional Planning and Social Development Seminar, held in Baghdad, 19-22 April 1971, pp. 78-90.

2 U.N. Statistical Office, Basic Principles of the System of Balances of the National Economy, Studies in Methods, Series F, No. 17, New York, 1971.

3 Haseeb, Khair al-Din, The National Income ..., op. cit., p. 179.

To compare two periods of regional national income estimates at current factor cost prices required a price deflator, but there was no feasible means of constructing the necessary indices on a regional level for the period 1956-1971. In making the comparisons, the assumption is made that prices rise at the same rate in each governorate.

4) The oil sector estimates in both 1956 and 1971, used a similar approach in estimating value added and the contribution of the sector in each governorate in terms of either oil production or administration. The wages and salaries paid to 'oil workers' in each governorate were regarded as the only contribution of this sector to the economic activity of the governorate concerned, though there were obviously significant indirect effects via the redistribution of oil revenue by the central government through current or development expenditure in the ordinary or economic plan budgets.

In 1956, Haseeb's figures show some estimates for the oil sector in other than the main four governorates of Kirkuk, Nineveh, Basrah and Baghdad. This was most obvious in the Anbar governorate which borders on Syria. We conclude that the appearance of these estimates resulted from the transportation of oil through the pipelines across the borders. This sort of activity should be computed within the transport sector as recommended by the U.N. Statistical Office, but due to the difficulties involved in separating out each process in oil production, it was included within the oil sector. We have, therefore, adjusted the figures so that the 'oil wages' paid in the Anbar governorate in 1956 are added to the wage bill for the Kirkuk governorate for that year, so that the Kirkuk figures for 1956 are comparable to those for 1971.

5) The expression of GNP or NNP (Net National Product/Income) exclude the profits of the oil companies. This can be easily seen in Table (B.1, columns 7 and 8). The oil companies' share of profits was treated as "factor income from abroad". The approach adopted for the oil sector also means that a deduction of the government's share of profit has to be made as well (Table 3.1, column 8).

The remaining components of value added consist of wages and salaries which appear in total NNP shown in the above mentioned Table (B.1, column 10), and the depreciation item, when GNP is used, as in Table (3.1, column 8).

B Regional Distribution of GNP by Commodity Sector

The regional differences in the availability of natural resources is perhaps an important factor determining the regional imbalance of the development process and, in Iraq, clearly favours certain governorates. It is also the case, however, that some governorates, though not well favoured with growth potential (or natural resources) have enjoyed notable benefits, having been accorded some degree of priority in the allocation of development expenditure due to political and other considerations. The ability of the backward areas to catch up with the national standard depends in part, therefore, on being favoured by decision makers and planners.

Economic activity in the three regions is of central importance as it is a reflection of regional economic potential. We have computed the regional GNP for the commodity sector in 1971, to be associated

TABLE (3.1)
Regional Distribution of GNP by Commodity Sector, 1971

(ID. 000)

GOVERNORATES	AGRICULTURE (1)	%	CRUDE OIL (2)	%	MANUFACTURING INDUSTRY (3)	%	ELECTRICITY & WATER (4)	%	CONSTRUCTION (5)	%	INCOME to ABROAD (6)	GNP (7)	%	GNP (excl. Oil Profits) (8)	%
NORTHERN REGION	41.283	54.4	344.829	15.0	12.347	16.3	2.969	3.9	7.915	10.4	150.049	259.294	42.6	75.900	22.4
Dhok	6.190	89.2	0	0	0.098	1.4	0.055	0.8	0.600	8.6	0	6.943	1.1	6.943	2.1
Nineveh	11.655	49.4	8.762	3.0	6.978	29.6	0.520	2.2	3.735	15.8	3.628	28.022	4.6	23.587	7.0
Sulaiymaniya	9.702	68.8	0	0	2.698	19.2	0.441	3.1	1.259	8.9	0	14.100	2.3	14.100	4.2
Kirkuk	7.913	34.3	336.067	46.3	1.717	7.4	1.552	6.7	1.214	5.3	146.421	202.042	33.2	23.083	6.8
Arbil	5.823	71.1	0	0	0.856	10.5	0.401	4.9	1.107	13.5	0	8.187	1.4	8.187	2.4
CENTRAL REGION	78.085	39.1	0.600	0.3	80.715	40.4	12.511	6.2	28.003	14.0	0	199.914	32.8	199.914	59.0
Diala	10.267	68.5	0	0	2.177	14.5	0.412	2.8	2.132	14.2	0	14.988	2.5	14.988	4.4
Anbar	4.305	65.8	0	0	1.023	15.7	0.300	4.6	0.910	13.9	0	6.538	1.1	6.538	1.9
Baghdad	32.283	25.6	0.600	0.5	62.357	49.5	10.070	8.0	20.716	16.4	0	126.026	20.7	126.026	37.2
Babylon	12.312	53.0	0	0	8.995	38.7	0.579	2.5	1.350	5.8	0	23.236	3.8	23.236	6.9
Kerbela	6.553	50.5	0	0	3.720	28.6	0.857	6.6	1.857	14.3	0	12.987	2.1	12.987	3.8
Wasit	12.365	76.6	0	0	2.443	15.2	0.293	1.8	1.038	6.4	0	16.139	2.6	16.139	4.8
SOUTHERN REGION	34.605	55.0	163.477	8.5	11.107	17.7	4.208	6.7	7.588	12.1	71.142	149.843	24.6	62.892	18.6
Quadisiya	11.782	85.5	0	0	1.018	7.4	0.321	2.3	0.658	4.8	0	13.779	2.3	13.779	4.1
Muthanna	2.155	50.4	0	0	1.678	39.3	0.103	2.4	0.337	7.9	0	4.273	0.7	4.273	1.3
Thi-Qar	6.912	78.2	0	0	0.818	9.3	0.350	3.9	0.757	8.6	0	8.837	1.4	8.837	2.6
Maysan	8.413	73.4	0	0	2.158	18.8	0.204	1.8	0.689	6.0	0	11.464	1.9	11.464	3.4
Basrah	5.343	21.8	163.477	21.9	5.435	22.1	3.230	13.2	5.147	21.0	71.142	111.490	18.3	24.539	7.2
ALL GOVERNORATES	153.973	45.5	508.906	5.1	104.169	30.8	19.688	5.8	43.506	12.8	221.191	609.051	100.0	338.706	100.0

Source: See Appendix B.

Note: These percentages show the relative share of each sector in total regional GNP.
The oil sector's share includes only wages, salaries and depreciation.

with the analysis of the regional size distribution of income in the same year.

As mentioned above the method used and the statistical data for the estimation of the regional accounts are discussed in Appendix (B).

Table (3.1) shows the 1971 distribution of the commodity sectors GNP by governorates. It is evident (from column 8) that the greatest concentration of GNP is in the Central region (almost three fifths of GNP). The Baghdad governorate itself has the highest proportion of GNP. Nineveh and Basrah governorates also show higher contributions both nationally and regionally.

B 1 Per Capita Income and Productivity, 1971

The imbalances and disparities referred to can be related to the data in Table (3.2) which shows the regional per capita income and the productivity per worker - in terms of Value added by the number of workers - in 1971. The national average was selected as a basis for reference. It seems that there are wide regional variations in per capita income. The Central region's per capita income is higher than that of the Northern and Southern regions by one third. Productivity in the Central region is also higher: 2.3 and 2.5 times that of productivity in the Northern and Southern regions respectively.

Three governorates, Thi-Qar in the South, Arbil in the North and Anbar in the Central region are distinguished by the poorest level of both per capita income and productivity. On the other hand, Baghdad, Babylon and Wasit (Central), Qadisiya (South) and Dhok (North)

TABLE (3.2)
Regional Per Capita Income and Productivity in Iraq, 1971.

GOVERNORATES	Per Capita Income			Productivity Per Worker		
	Average Income ID.	Average Income (National average = 100)	Rank	Average Productivity ID.	Average Productivity (National average = 100)	Rank
NORTHERN REGION	28.4	83.8		87.4	62.9	
Dhok	43.7	129.0	3	101.6	73.2	8
Nineveh	27.5	81.2	12	75.1	54.1	14
Sulaimaniya	28.9	85.3	9	81.2	58.5	12
Kirkuk	32.1	94.8	8	131.7	94.8	5
Arbil	19.0	56.1	14	70.0	50.4	15
CENTRAL REGION	39.8	117.5		214.2	154.3	
Diala	32.9	97.1	6	98.3	70.8	9
Anbar	18.5	54.6	15	78.9	56.8	13
Baghdad	44.4	131.1	1	393.9	283.7	1
Babylon	43.8	129.3	2	124.1	89.4	7
Kerbela	27.5	81.2	11	182.6	131.5	2
Wasit	43.6	128.7	4	134.8	97.1	4
SOUTHERN REGION	26.7	78.8		93.7	67.5	
Qadisiya	33.6	99.2	5	130.8	94.2	6
Muthanna	28.7	84.7	10	96.1	69.2	10
Thi-Qar	16.7	49.3	16	42.0	30.2	16
Maysan	32.3	95.3	7	89.4	64.4	11
Basrah	26.8	79.2	13	141.0	101.5	3
ALL GOVERNORATES	33.9	100.0		138.9	100.0	

Source: See Table (3.1). GNP (excluding oil profits) used with population figures for 1971 from: Central Statistical Organization, Annual Abstract of Statistics, 1974, p. 34.
Total employed workers figures from Table (2.5).

governorates occupy the top five governorate positions, ranked by per capita income. With respect to productivity only the governorates of Baghdad and Wasit retain a similar position while Kerbela in the Central region, Basrah (South) and Kirkuk (North) have a higher rank.

It is revealing to find that 12 governorates out of 16 (all of those in the Southern region, four out of five in the North, but only three out of six from the Central region) are below the national average in terms of per capita income. The situation is little different in terms of productivity with 13 governorates below the national average and only three (Baghdad and Kerbela (Central) and Basrah (South))above the average.

Apart from such inter-governorate disparities, it is possible that more disaggregated research would reveal disparities in income and productivity within each governorate.

B 2 Sectoral Productivity, 1971

The variation in productivity levels between governorates is more interesting when broken down into commodity sectors than at an aggregate level. This is shown in Table (3.3), which presents, in the form of index numbers, the sectoral differences in productivity.

The average productivity level for all non-agricultural sectors was taken as a basis for comparison with the agricultural sector and with each of the non-agricultural sectors individually. Important observations about productivity emerge from Table (3.3). Agricultural productivity in all regions is much below the average of all non-

TABLE (3.3)
Regional Productivity (Gross Value Added/Workers) by Sectors, 1971.
(Non-agricultural average = 100)

GOVERNORATES	AGRICULTURE SECTOR	TOTAL NON-AGRICULTURE SECTORS	NON-AGRICULTURE SECTORS			
			OIL	MANUFACTURING INDUSTRIES	ELECTRICITY	CONSTRUCTION
NORTHERN REGION	9.8	100.0	161.4	79.4	194.2	96.5
Dhok	19.2	100.0	0	70.0	128.2	105.2
Nineveh	7.4	100.0	95.5	94.9	98.7	112.1
Sulaimaniya	9.5	100.0	0	90.9	200.3	104.0
Kirkuk	10.0	100.0	142.7	45.5	247.9	75.0
Arbil	14.8	100.0	0	160.4	311.4	107.5
CENTRAL REGION	14.6	100.0	300.5	97.1	175.1	89.3
Diala	10.1	100.0	0	79.8	196.4	119.6
Anbar	9.4	100.0	0	77.4	212.9	118.2
Baghdad	23.3	100.0	291.7	99.9	163.3	83.0
Babylon	8.8	100.0	0	102.4	179.6	74.2
Kerbela	22.6	100.0	0	74.4	380.7	153.4
Wasit	19.1	100.0	0	88.3	208.7	119.9
SOUTHERN REGION	10.1	100.0	205.8	73.9	293.7	95.0
Qadisiya	22.9	100.0	0	80.0	333.3	104.7
Muthanna	5.8	100.0	0	104.9	63.0	95.2
Thi-Qar	8.8	100.0	0	81.3	471.7	89.7
Maysan	15.5	100.0	0	87.5	241.9	137.4
Basrah	6.5	100.0	188.0	63.6	297.0	92.0

Sources: Tables (3.1) and (2.5).

agricultural sectors. But agricultural productivity in most places is low. Above average performance is shown by the following governorates: Baghdad, Kerbela, Wasit (Central), Qadisiya, Maysan (South) and Dhok, Arbil (North).

These low productivity levels are perhaps due to the traditional methods used in agriculture, and the high proportion of the labour force engaged in the agricultural sector. In the non-agricultural sectors relatively more advanced techniques are combined with a higher capital/labour ratio. Productivity in the manufacturing industries is in general below the average for all non-agricultural sectors and a comparison of the variation ratios[1] in the agricultural and industrial sectors alone shows the following:

Region	Agriculture	Industry
Northern	0.3419	0.2575
Central	0.3755	0.2827
Southern	0.5185	0.5352
ALL	0.4787	0.3320

1 The variation ratio equation used was as follows:

$$V = \frac{\sqrt{\sum (Pi - \bar{P})^2 \ \frac{fi}{n}}}{\bar{P}}$$

where Pi = Productivity of the i^{th} governorate

$\bar{P}$ = Regional productivity average

fi = Number of workers in the agriculture sector (or industry) of the i^{th} governorate

n = Total number of workers in agriculture (or industry) of each region.

It is clear first, that there was a wider variation in productivity, both on aggregate and within two out of three regions, in the agricultural sector than in the industrial sector. The Southern region had the highest variation in both sectors.

The electricity and oil sectors are marked by higher productivity, while the range of productivity differences is only moderate in comparison with other sectors at both a regional and governorate level.

B 3 Growth Rates, 1956-1971

There is also evidence that the different regions and governorates have experienced widely varying rates of growth. This emerges from Table (3.4). It presents the growth rates achieved during the period 1956-1971, by each region and governorate in the different commodity sectors. On aggregate, the Central region enjoyed the highest growth rate, followed by the Southern region, while the Northern region had the lowest growth. The Southern region was also top of the growth table in the electricity and construction sectors as well as the oil sector.

It is possible that the lower rate of growth attained by some governorates was due to a combination of factors. For instance, Nineveh and Kirkuk in the Northern region, enjoyed both vast oil wealth and rain-fed, fertile soil, but they also suffered a low growth rate. In the North, Arbil had a nil growth rate, while in the South, Thi-Qar, Maysan governorates were found to have the lowest growth.

On a sectoral level, manufacturing and electricity showed the

TABLE (3.4)
Regional Growth Rates by Sectors, 1956-1971

GOVERNORATES	NET NATIONAL INCOME (EXCL. PROFITS FROM OIL COMP.)	COMMODITY SECTORS				
		AGRICULTURE	OIL*	INDUSTRY	ELECTRICITY	CONSTRUCTION
NORTHERN REGION	2.4	1.7	2.6	5.8	12.0	1.2
Dhok	2.9	2.0	0.5	4.6	4.6	5.8
Nineveh						
Sulaimaniya	3.3	4.5	0	11.2	17.1	(-)5.8
Kirkuk	2.2	1.1	2.9	5.4	15.7	(-)1.2
Arbil	0.0	(-)1.5	0	5.8	17.7	7.9
CENTRAL REGION	5.9	5.4	(-)13.3	7.9	13.6	3.8
Diala	4.0	3.0	0	4.5	14.9	9.7
Anbar	5.7	4.1	0	11.0	15.5	9.9
Baghdad	6.0	6.7	(-)13.3	7.4	13.6	3.6
Babylon	6.2	4.0	0	13.0	16.1	4.1
Kerbela	9.4	13.4	0	6.4	11.2	5.6
Wasit	4.2	4.2	0	15.8	12.2	(-)2.9
SOUTHERN REGION	3.6	2.1	6.3	6.6	17.5	4.8
Qadisiya	5.1	5.0	0	8.6	12.9	1.3
Muthanna						
Thi-Qar	0.9	(-)0.2	0	8.7	18.3	7.4
Maysan	1.5	0.2	0	11.6	9.4	6.4
Basrah	5.3	3.1	6.3	4.5	19.4	5.2
ALL GOVERNORATES	4.5	3.4	0.6	7.5	14.0	3.4

Source: Appendix B. Table (B.1)

* The oil sector rate of growth refers to the wages and salaries components of the value added only.

highest rates of growth. This was most apparent in the Central and Southern regions.

As to the agricultural sector, the rates of growth on a regional and governorate level, were everywhere very low, with some exceptions in the Central region. But despite that, care must be taken in basing an analysis on the results from two end years. Though such an approach is more acceptable in the industrial sector, the considerable yearly fluctuations in agricultural output demand that an average output for at least three years be taken to ensure a reasonably accurate picture. But since no data on agricultural output[1] on a regional level exists other than these two years at present, no alternative exists to using these figures. Any conclusions based on these growth rates - and to some extent those to come in the next part - must therefore be treated with caution.

The lower rate of growth achieved in the oil sector is explained by the fact that only the wages and salaries of value added are included. The reduction in the number of those employed in Kirkuk and Baghdad as well as the decision to abandon oil production in Khanaqin in 1956 were behind the sharp decline in wages growth. In 1956 the construction sector in the Northern region was mostly involved in irrigation and dam projects carried out by the Development Board. This would explain its low growth rate compared with that of 1971.

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1 See Figure 5, p. 154.

B 4 The Changing Relative Importance of the Commodity Sectors, 1956 and 1971

A comparison of the regional distribution of national product of the commodity sectors in 1956 and 1971 reveals that the relative importance of the commodity sector has changed in each region and governorate. This is shown in Table (3.5) where the percentages presented relate to values at current factor prices. These comparisons should be treated with caution as there are no regional price indices for deflation to constant price terms. Nevertheless, it seems clear that the differences in the industrial component is quite considerable between governorates. The agricultural sector's contribution, on a national level, decreased from 57.4 per cent to 49 per cent. A similar pattern is evident in all regions. In the Southern region, agriculture's share experienced the most significant decline - from 74 per cent to 60 per cent. The Central region had the lowest decrease in the agricultural share of regional product, but it was already the region in which the level of the agricultural share was lowest.

Another interesting aspect of the changes in the regional structure is that the industrial sector had increased its share by nearly 6 per cent in 1971 over 1956 for the Northern and Southern regions, while the highest increase was achieved in Central region which was around 9.4 per cent.

During this period of fifteen years, the contribution of the construction sector to regional product gradually declined in the Central region as well as in the Northern region. In the Southern region, however, it increased by 2.5 per cent.

TABLE (3.5)
The Relative Importance of Commodity Sectors by Regions, 1956 and 1971

(percentage)

GOVERNORATES	AGRICULTURE		OIL		INDUSTRY		ELECTRICITY		CONSTRUCTION		NOTIONAL INCOME (excluding profits from oil sector)
	1956	1971	1956	1971	1956	1971	1956	1971	1956	1971	
NORTHERN REGION	66.0	59.3	11.0	11.4	9.3	15.2	0.9	3.3	12.8	10.8	100.0
Dhok	69.6	90.1	3.7	0	16.2	1.2	1.2	0.6	9.3	8.1	100.0
Nineveh		51.9		3.0		27.1		1.8		16.2	100.0
Sulaimaniya	60.9	71.9	0	0	5.6	16.8	0.4	2.5	33.1	8.8	100.0
Kirkuk	49.4	41.5	34.5	38.2	4.9	7.8	1.0	6.4	10.2	6.1	100.0
Arbil	91.4	73.4	0	0	4.0	9.3	0.3	4.0	4.3	13.3	100.0
CENTRAL REGION	44.6	41.7	5.3	0.3	28.5	37.9	1.9	5.4	19.7	14.7	100.0
Diala	81.2	70.6	0	0	11.9	13.0	0.5	2.2	6.4	14.2	100.0
Anbar	84.2	67.5	0	0	6.9	14.4	1.0	3.9	7.9	14.2	100.0
Baghdad	25.0	27.5	8.7	0.6	39.0	47.4	2.5	7.0	24.7	17.5	100.0
Babylon	77.8	57.0	0	0	13.7	35.1	0.5	2.1	8.0	5.8	100.0
Kerbela	31.5	54.2	0	0	39.7	25.9	4.3	5.4	24.5	14.4	100.0
Wasit	77.6	77.6	0	0	2.9	14.2	0.5	1.5	19.0	6.7	100.0
SOUTHERN REGION	74.0	59.5	3.9	5.8	10.7	16.5	0.9	5.7	10.5	12.5	100.0
Qadisiya	81.5	86.9	0	0	8.2	6.5	0.7	1.9	9.6	4.7	100.0
Muthanna		53.7	0	0		36.2		2.0		8.1	100.0
Thi-Qar	93.7	79.9	0	0	2.7	8.3	0.3	3.2	3.3	8.6	100.0
Maysan	92.6	75.9	0	0	4.0	16.7	0.5	1.4	2.9	6.0	100.0
Basrah	35.6	26.0	13.9	16.0	25.0	22.3	1.8	12.1	23.7	23.6	100.0
ALL GOVERNORATES	57.4	49.0	6.7	3.8	18.9	28.8	1.3	5.0	15.7	13.4	100.0

Source: Appendix B, Table (B.1).

The electricity and water sector have increased their relative importance in all regions.

It may be said, therefore, that all regions share the common characteristic of a declining agricultural contribution (in relative terms) to total product, to the benefit of the industrial sector. This development underlies the non-agricultural commodity sector's role in economic development in all regions.

At this stage, it is instructive to refer to the regional differential in the generation of income as is shown below in Table (3.6).

Table (3.6)

Regional Income by Sectoral Share, 1956 and 1971

Region	Agriculture		Industry		Electricity		Construction		Total	
	1956	1971	1956	1971	1956	1971	1956	1971	1956	1971
North	35.1	27.3	15.0	11.9	19.5	15.1	25.0	18.2	30.5	22.5
Central	37.5	50.1	73.0	77.5	67.0	63.5	60.7	64.4	48.3	58.8
South	27.4	22.6	12.0	10.6	13.5	21.4	14.3	17.4	21.2	18.7
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Appendix B Table (B.1).

A high proportion of the output of those four sectors is generated in the Central region (half in 1956 and two fifths in 1971). Of the 1971 Central region share, 61.9 per cent was created in the Baghdad governorate alone. Other regions had a disproportionately small and declining share in total income.

The regional disparity in the distribution of the commodity sector

incomes is further accentuated by differences in the provision of public educational and health services, as will be shown later in this chapter.

With reference to the regional distribution of population and of cultivated agricultural land (Tables 2.2 and 3.12 respectively), it would seem that neither overpopulation nor a shortage of minerals, land or water, are likely to have been the cause of the disparity in growth rates. It is more likely that this was caused by the lower levels of productivity, the inefficient use of available resources and the differences in the distribution of investment, as well as other factors.

C Regional Distribution of Industrial Activity

The industrial sector in Iraq shows a higher growth potential than any other sector. Its contribution to GNP tended to increase during the 1964-1971 period (as noted in the previous chapter) reaching to 12.3 per cent in 1971.

The purpose of this section, therefore, is to study the main aspects of industrial activity by region and governorate by estimating detailed regional values of output, input and gross value added for 1971. These estimates, as well as the regional distribution of industrial employment for 1971, are presented according to the size of establishment.

C 1 Regional and Sectoral Contributions of Manufacturing to GDP

Tables (3.7) and (3.8) show the value of input and output and value added of the manufacturing industry sector of each governorate to the gross industrial component of the GDP for 1971. The tables also show the contributions of the governorates by regional grouping and by large and small scale establishments. It can be seen that from the data shown on the tables, the Central region produces about 76 per cent of the total value of output and 77.5 per cent of industrial value added. Of this regional share, Baghdad governorate alone contributed over two thirds of the output and accounted for nearly two thirds of the region's contribution to industrial GDP. The Northern region gross output amounted to 13.9 per cent, an equivalent of 11.8 per cent of the industrial sector's GDP. Of the above output and GDP, Nineveh governorate, the most industrialized zone in the region, contributed 8.5 per cent in output or 6.7 per cent of the sector's GDP. The output of Sulaimaniya and Dhok governorates were 3.1 per cent and 0.1 per cent, with GDP contributions of 2.6 per cent and 0.1 per cent respectively. The Southern region has the lowest industrial contribution in the regional gross output as well as in the GDP, due to the insignificance of industrial establishments in comparison with the agricultural sector. However, data from the industrial survey reported on the tables above show that Basrah governorate accounts for more than one half of industrial output and GDP created in this region, followed by Maysan and Muthanna governorates.

TABLE (3.7)
Regional Output, Input and Value Added for Manufacturing Industries, 1971

(ID.000)

GOVERNORATES	TOTAL VALUE OF OUTPUT (1)			VALUE OF INPUTS (2)			GROSS VALUE ADDED (3)=(1-2)		
	Large Scale	Small Scale	Total	Large Scale	Small Scale	Total	Large Scale	Small Scale	Total
NORTHERN REGION	26332	11280	37612	18602	6663	25265	7730	4617	12347
Dhok	0.0	311	311	0.0	213	213	0.0	98	98
Nineveh	19136	3897	23033	13872	2183	16055	5264	1714	6978
Sulaimaniya	5793	2457	8250	3766	1786	5552	2027	671	2698
Kirkuk	991	2651	3642	604	1321	1925	387	1330	1717
Arbil	412	1964	2376	360	1160	1520	52	804	856
CENTRAL REGION	165949	40490	206439	105828	19896	125724	60121	20594	80715
Diala	2399	1847	4246	986	1083	2069	1413	764	2177
Anbar	1318	746	2064	681	360	1041	637	386	1023
Baghdad	136902	28186	165088	90161	12570	102731	46741	15616	62357
Babylon	18153	2838	20991	10242	1754	11996	7911	1084	8995
Kerbela	3759	5640	9399	2214	3465	5679	1545	2175	3720
Wasit	3418	1233	4651	1544	664	2208	1874	569	2443
SOUTHERN REGION	17102	9011	26113	10534	4472	15006	6568	4539	11107
Qadisiya	762	1207	1969	284	667	951	478	540	1018
Muthanna	2544	370	2914	1060	176	1236	1484	194	1678
Thi-Qar	315	1650	1965	110	1037	1147	205	613	818
Maysan	3767	1238	5005	2189	658	2847	1578	580	2158
Basrah	9714	4546	14260	6891	1934	8825	2823	2612	5435
ALL GOVERNORATES	209383	60781	270164	134964	31031	165995	74419	29750	104169
Other Mining (-)	438	44	482	117	22	139	321	22	343
Total Manufacturing	208945	60737	269682	134847	31009	165856	74098	29728	103826

Source: Central Statistical Organization, The Results of Annual Industrial Statistics for Large Industrial Establishments and Small Industrial Establishments of 1971, Baghdad, 1972.

TABLE(3.8)
Regional Share of Industrial Output and GDP, 1971

(percentage)

GOVERNORATES	ALL INDUSTRIES		LARGE ESTAB.		SMALL ESTAB.		% OF OUTPUT		% OF GDP	
	Output (1)	GDP (2)	Output (3)	GDP (4)	Output (5)	GDP (6)	Large Estab. (7=3÷1)	Small Estab. (8=5÷1)	Large Estab. (9=4÷2)	Small Estab. (10=6÷2)
NORTHERN REGION	13.9	11.8	12.6	10.4	18.6	15.5	70.0	30.0	62.6	37.4
Dhok	0.1	0.1	0.0	0.0	0.5	0.3	0.0	100.0	0.0	100.0
Nineveh	8.5	6.7	9.1	7.1	6.4	5.8	83.1	16.9	75.4	24.6
Sulaimaniya	3.1	2.6	2.8	2.7	4.1	2.3	70.2	29.8	75.1	24.9
Kirkuk	1.3	1.6	0.5	0.5	4.4	4.4	27.2	72.8	22.5	77.5
Arbil	0.9	0.8	0.2	0.1	3.2	2.7	17.3	82.7	6.1	93.9
CENTRAL REGION	76.4	77.5	79.2	80.8	66.6	69.2	80.4	19.6	74.5	25.5
Diala	1.6	2.1	1.2	1.9	3.0	2.6	56.5	43.5	64.9	35.1
Anbar	0.8	1.0	0.6	0.9	1.2	1.3	63.9	36.1	62.3	37.7
Baghdad	61.1	59.9	65.4	62.8	46.4	52.5	82.9	17.1	75.0	25.0
Babylon	7.8	8.6	8.7	10.6	4.7	3.6	86.5	13.5	87.9	12.1
Kerbela	3.5	3.6	1.8	2.1	9.3	7.3	40.0	60.0	41.5	58.5
Wasit	1.7	2.3	1.6	2.5	2.0	1.9	73.5	26.5	67.7	23.3
SOUTHERN REGION	9.7	10.7	8.2	8.8	14.8	15.3	65.5	34.5	59.1	40.9
Qadisiya	0.7	1.0	0.4	0.6	2.0	1.8	38.7	61.3	46.9	53.1
Muthanna	1.1	1.6	1.2	2.0	0.6	0.7	87.3	12.7	88.4	11.6
Thi-Qar	0.7	0.8	0.2	0.3	2.7	2.1	16.1	83.9	25.1	74.9
Maysan	1.9	2.1	1.8	2.1	2.0	1.9	75.3	24.7	73.1	26.9
Basrah	5.3	5.2	4.6	3.8	7.5	8.8	68.1	31.9	51.9	48.1
ALL GOVERNORATES	100.0	100.0	100.0	100.0	100.0	100.0	77.5	22.5	71.4	28.6

Source: Table (3.7).

C 2 Regional Contributions by Size of Establishment

Contributions to industrial output and GDP by scale of operation and region is shown in tables (3.7) and (3.8). The large scale establishments as a group contributed about 77.5 per cent of the gross industrial output or 71.4 per cent of the GDP. On a regional basis, as would be expected, the Central region, which has the greater concentration of large scale establishments contributed about 76.4 per cent of gross industrial output and a bit more than that of the GDP.

Of large establishments' gross output and GDP, the Central region accounted for 79.3 per cent and 80.8 per cent respectively. Of these shares Baghdad governorate contributed 65.4 per cent of output and 62.8 per cent of GDP. Babylon followed, while the rest was generated in the other Central governorates. The same concentration of small industrial establishments' output and GDP was found in the Central region and mainly in the Baghdad governorate. Large scale establishments in the Northern and Southern regions contributed 70.0 per cent and 65.5 per cent of the gross output or 62.6 per cent and 59.1 per cent of the industrial GDP respectively. Nineveh governorate from the North and Basrah governorate from the South are distinguished by being the dominant producers of industrial output of both small and large establishments in these two regions. In the Northern region, the governorates of Dhok, Arbil and Kirkuk and in the Southern region Thi-Qar and Qadisiya had most of their industrial output generated by small establishments. That is the case as well in the Kerbela and Babylon governorates of the Central region.

C 3 Regional Distribution of Industrial Employment

Table (3.9) shows the number of establishments and the number of employed population by skill level, for each governorate and their distribution between large and small scale establishments.

Of total industrial employment, 68.7 per cent is located in the Central region, of which Baghdad alone had 50.1 per cent, Babylon 6.3 per cent and Kerbela 5.9 per cent.

The Northern region had 16.1 per cent of all industrial employment. 7.8 per cent was concentrated in the Nineveh governorate, while the rest was distributed in varying proportions among the other Northern governorates.

The Southern region, with the lowest share of industrial concentration, had only 15.2 per cent of the nation's industrial employment, of which 50 per cent was concentrated in the Basrah governorate. The other governorates between them shared 7 to 10 per cent, while the Maysan governorate had up to 21.3 per cent of the region's industrial employment.

The greatest concentration of the employed population was in the Central region, and in particular the Baghdad governorate for both large and small scale establishments. The largest number of these establishments are also located in this region. The lowest proportion of large industrial establishments was found in the Northern region, and of small establishments in the Southern region.

Obviously, the disparity in the degree of industrial concentration

TABLE (3.9)
Regional Employment in Industry by Size of Establishment and Skill, 1971.

GOVERNORATES	SMALL INDUSTRIAL ESTABLISHMENTS						LARGE INDUSTRIAL ESTABLISHMENTS					
	NO. OF ESTABLISHMENTS	NO. OF EMPLOYEES					NO. OF ESTABLISHMENTS	NO. OF EMPLOYEES				
		ADMINIST.	SKILL	SEMI-SKILL	SERVICES	TOTAL		ADMINIST.	SKILL	SEMI-SKILL	SERVICES	TOTAL
NORTHERN REGION	7026	534	9334	5294	80	15242	135	1091	4009	6116	1072	12288
Dhok	148	0	214	76	0	290	0	0	0	0	0	0
Nineveh	2577	224	3232	2248	46	5750	69	625	3045	3244	691	7605
Sulaimaniya	1336	144	1960	479	1	2584	13	202	326	1521	191	2240
Kirkuk	1858	133	2596	1364	9	4102	38	223	491	728	137	1579
Arbil	1107	33	1332	1127	24	2516	15	41	147	623	53	864
CENTRAL REGION	17637	1578	26739	12464	263	41044	962	7628	22774	41406	4975	76783
Diala	922	144	1458	516	5	2123	23	153	737	757	119	1766
Anbar	590	21	823	344	4	1192	10	85	241	752	20	1098
Baghdad	10754	948	16259	7842	182	25231	809	6249	17626	32923	3854	60652
Babylon	1340	176	2302	827	36	3341	55	797	2604	3496	656	7553
Kerbela	3151	232	4913	2569	6	7720	56	214	571	1375	160	2320
Wasit	880	57	984	366	30	1437	9	130	995	2103	166	3394
SOUTHERN REGION	5277	583	7791	2695	126	11195	233	1116	2714	9855	1153	14838
Qadisiya	866	63	1354	330	30	1777	13	52	85	554	42	733
Muthanna	423	7	468	251	5	731	10	57	398	473	162	1090
Thi-Qar	989	111	1333	503	10	1957	19	33	101	493	48	675
Maysan	907	274	3497	1151	70	4992	38	312	675	2393	436	8524
Basrah	2092	128	1139	460	11	1738	153	662	1455	5942	465	3816
ALL GOVERNORATES	29940	2695	43864	20453	469	67481	1330	9835	29497	57377	7200	103909

Source: See Table (3.7).

and in the share of regions and governorates in GDP is a major characteristic of the Iraqi industrial sector. There is an even greater disparity in the distribution of skilled workers and administrative employees.

More specifically, the bulk of the country's industrial establishments is concentrated in three governorates where the infrastructure and services essential for rapid industrialization have been provided. These industrial areas are Baghdad, Nineveh and Basrah.

D Regional Distribution of Agricultural Activity

The significance of this sector in the Iraqi economy arises from the fact that more than half of the total employed population is engaged in agricultural activities. In relation to the distribution of these activities, the value added for each governorate has been estimated.

In order to examine the extent of the regional disparity in rural areas, we have paid particular attention to the distribution and ownership of land. The regional distribution of agricultural holdings and the tenure system will also be covered in this section.

D 1 The Regional Distribution of Agricultural Ouput and GDP

The estimated agricultural output and gross value added for each governorate are shown in Table (3.10).

Reference has been made to the importance and concentration of the three main centres of industrial activity. With the exception of the Basrah governorate, Baghdad's position remains dominant in providing agricultural products. The value added in Baghdad accounted for 21 per cent of GDP, of which 41.3 per cent was created in the Central region.

Nineveh governorate in the Northern region also played a leading role. The contribution of each governorate to GDP varied greatly, and this can be seen from the disparities in income between different areas; in rural areas where agricultural activity was the dominant source of income the contribution to GDP was low.

The distribution of arable land and the availability of abundant water were two of the factors affecting agricultural output in each governorate. But the efficiency of productive factors, especially the human factor had a significant effect on output, for example: the promotion of agricultural activity, the level of agricultural mechanization, the introduction of modern technology, the fertilizers used, etc.

A high proportion of agricultural output was composed of field crops, especially wheat, barley and cotton. The Central and Northern regions were the major producers of these crops, and in addition the Northern region was a major producer of tobacco. However, in the

TABLE (3.10)
Regional Components of Agricultural Sector GDP, 1971. At Current Factor Prices

A - Agricultural Product

(ID. 000)

GOVERNORATES	WHEAT	BARLEY	RICE	COTTON	OTHER FIELD CROPS	VEGE-TABLES	FRUITS	TOBACCO	DATES	TOTAL VALUE OF OUTPUT	INPUTS	AGRICULTURAL G.D.P. VALUE	AGRICULTURAL G.D.P. PERCEN-TAGE
NORTHERN REGION	12733	1607	1759	1816	2442	2397	3888	6037	0	32679	7337	25342	28.3
Dhok	4101	273	562	0	237	485	988	290*	0	6936	1557	5379	6.0
Nineveh	3351	396	463	842	1271	876	365	0	0	7564	1698	5866	6.6
Sulaimaniya	2212	324	442	218	192	341	121	4618	0	8468	1901	6567	7.3
Kirkuk	1809	370	227	606	154	351	1378	66	0	4961	1114	3847	4.3
Arbil	1260	244	65	150	588	344	1036	1063	0	4750	1067	3683	4.1
CENTRAL REGION	13855	11766	3902	1080	6022	11000	7027	48	1364	56064	12588	43476	48.5
Diala	2253	3584	0	304	938	520	1548	0	143	9290	2086	7204	8.1
Anbar	608	196	0	354	1514	562	114	0	27	3375	758	2617	2.9
Baghdad	3743	1030	245	185	1002	5174	3777	0	116	15272	3429	11843	13.2
Babylon	2042	2960	578	42	866	3396	672	0	748	11304	2538	8766	9.8
Kerbela	82	155	2671	0	1048	393	533	48	312	5242	1177	4065	4.5
Wasit	5127	3841	408	195	654	955	383	0	18	11581	2600	8981	10.0
SOUTHERN REGION	3210	3402	14217	12	2294	1631	204	0	1826	26796	6016	20780	23.2
Qadisiya	1072	927	8270	12	826	350	129	0	232	11818	2653	9165	10.2
Muthanna	247	136	564	0	385	103	26	0	35	1496	336	1160	1.3
Thi-Qar	1008	1294	988	0	618	248	18	0	109	4283	962	3321	3.7
Maysan	770	1041	4266	0	373	331	5	0	37	6823	1532	5291	5.9
Basrah	113	4	129	0	92	599	26	0	1413	2376	533	1843	2.1
TOTAL	29798	16775	19878	2908	10758	15028	11119	6085	3190	115539	25941	89598	100.0

* This figure refers to the cultivation of Tobacco mainly at Dhok, but it was a combined to both Dhok and Nineveh Governorates.

Source: See Appendix B.

TABLE (3.10) Continued.

B - Livestock Product

(ID. 000)

GOVERNORATES	MEAT	MILK	SKINS	WOOL	TOTAL VALUE OF OUTPUT	INPUTS	LIVESTOCK GDP		TOTAL GDP IN AGRICULTURAL SECTOR		REGIONAL PERCENTAGE
							VALUE	PERCENTAGE	VALUE	PERCENTAGE	
NORTHERN REGION	8359	9147	359	397	18262	2321	15941	24.8	41283	26.8	100.0
Dhok	139	760	6	24	929	118	811	1.3	6190	4.0	15.0
Nineveh	3853	2427	153	199	6632	843	5789	9.0	11655	7.6	28.2
Sulaimaniya	1108	2396	59	29	3592	457	3135	4.9	9702	6.3	23.5
Kirkuk	2321	2136	97	104	4658	592	4066	6.3	7913	5.1	19.2
Arbil	938	1428	44	41	2451	311	2140	3.3	5823	3.8	14.1
CENTRAL REGION	26445	11896	990	316	39647	5038	34609	53.7	78085	50.7	100.0
Diala	1356	2042	55	56	3509	446	3063	4.8	10267	6.7	13.2
Anbar	807	1019	40	68	1934	246	1688	2.6	4305	2.8	5.5
Baghdad	19165	3430	733	88	23416	2976	20440	31.7	32283	21.0	41.3
Babylon	1779	2188	57	38	4062	516	2546	5.5	12312	8.0	15.8
Kerbela	2199	578	66	7	2850	362	2488	3.9	6553	4.2	8.4
Wasit	1139	2639	39	59	3876	492	3384	5.2	12365	8.0	15.8
SOUTHERN REGION	5753	9717	209	159	15838	2013	13825	21.5	34605	22.5	100.0
Qadisiya	916	2011	37	34	2998	381	2617	4.1	11782	7.6	34.1
Muthanna	361	737	14	28	1140	145	995	1.6	2155	1.4	6.2
Thi-Qar	951	3072	33	58	4114	523	3591	5.6	6912	4.5	20.0
Maysan	646	2872	23	35	3576	454	3122	4.8	8413	5.5	24.3
Basrah	2879	1025	102	4	4010	510	3500	5.4	5343	3.5	15.4
ALL GOVERNORATES	40557	30760	1558	872	73747	9372	64375	100.0	153973	100.0	

Source: See Appendix B.

Central governorates, in particular in Baghdad, Babylon, Diala and Wasit, agricultural activity was directed primarily to the cultivation of fruit and vegetables. The Southern governorates, especially the Qadisiya and Maysan governorates were the main rice producers. The Basrah governorate specialized in date production, a large proportion of which is exported.

In the sphere of livestock production, Baghdad governorate alone produced about 50 per cent of the meat, more than 11 per cent of the milk and the vast majority of other livestock products. About 53.8 per cent of livestock was produced in the Central governorates, 24.8 per cent in the Northern region, and the remainder in the Southern region.

Certain governorates such as Dhok and Arbil in the North, Anbar in Central region and Muthanna and Thi-Qar in the South were distinguished by their low level of agricultural output. The main cause of this was the limited amount of arable land, and its inferiority both in terms of land productivity and productivity per worker.

D 2 Land Distribution

There are a number of indicators other than that of agricultural productivity which demonstrate the disparities in agricultural income between the three main regions and within the governorates.

Many studies[1] suggest the need to consider, in addition to other variables, the importance of the distribution of land by the size of holdings and data for those without land.

One of the main causes of the inequality of income, is the inequitable distribution of wealth, particularly agricultural land. It has been suggested that the agricultural land reform of 1958 was an effective measure for the redistribution of income through the more equitable distribution of land. The distribution of land by size of holdings in 1958 and 1971 is shown in Table (3.11). This shows that, in fact no radical change in land distribution has been achieved. In 1958, there were about 2,480 holders with more than 2,000 Meshara per holder. These holders represented the top 1 (one) per cent of land owners, and they possessed more than 55 per cent of the agricultural land. At the opposite end of the scale, the lowest stratum of small holders, those owning less than 30 Meshara, accounted for about 64 per cent of the total number of holders, owning only about 3.7 per cent of the total agricultural land.

The situation in 1971, as shown in Table (3.11), shows that the lowest level of small holders, with holdings of less than 30 Meshara, who represent about 60 per cent of the total number of holders, owned about 14.1 per cent of the agricultural land. The top one per cent, however, owned 22.1 per cent.

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1 Dipak Mazumdar, An International Comparison of low Income in the Agriculture Sector in Selected Less Developed Countries, International Bank for Reconstruction and Development, Economic Staff Working Paper No. 18, Washington, October 1971, p. 6.

Table (3.11)

Size Distribution of Cultivated Units and Holdings in Iraq 1958 and 1971

SIZE CLASS Meshara	1958/1959				1971/1972			
	Holdings		Area		Holdings		Area	
	Number	%	Meshara	%	Number	%	Meshara	%
Less than one	23089	9.1	8599	0.03	6998	1.30	3449	0.0
1 and < 4	50021	19.7	93722	0.29	60226	11.17	128259	0.6
4 and < 10	40475	16.0	243004	0.76	89830	16.67	560175	2.5
10 and < 20	30431	12.0	411152	1.28	83351	15.46	1096870	4.9
20 and < 30	18038	7.1	419151	1.30	60878	11.29	1377904	6.1
30 and < 40	12907	5.1	423580	1.32	65834	12.21	2085941	9.3
40 and < 50	9673	3.8	417601	1.29	51227	9.50	2136379	9.5
50 and < 60	7787	3.1	411903	1.28	19567	3.63	1018534	4.5
60 and < 80	13422	5.3	892184	2.77	38871	7.21	2531625	11.2
80 and < 100	8675	3.4	751769	2.34	14240	2.64	1217625	5.4
100 and < 120	8087	3.2	847351	2.64	14537	2.70	1498000	6.7
120 and < 150	5810	2.3	756918	2.35	17409	3.23	2141871	9.5
150 and < 200	7103	2.8	1184728	3.68	6854	1.27	1111608	4.9
200 and < 300	6224	2.5	1439130	4.48	4079	0.76	937032	4.2
300 and < 400	2788	1.1	921494	2.86	1716	0.32	560045	2.5
400 and < 500	1496	0.6	649391	2.02	860	0.16	367766	1.6
500 and < 600	957	0.4	508787	1.58	512	0.09	268287	1.2
600 and < 800	1209	0.5	819561	2.55	570	0.11	378051	1.7
800 and < 1000	750	0.3	664083	2.07	299	0.06	264130	1.2
1000 and < 1300	1832	0.7	1446209	7.96	550	0.10	575897	2.6
1300 and < 1600			1113981		129	0.02	184672	0.8
1600 and < 2000			3583931		103	0.02	180787	0.8
2000 and over	2480	1.0	4966391	55.14	427	0.08	883999	8.4
	253254	100.0	32154813	100.00	539067	100.00	2508905	100.0

Sources: 1 Ministry of Planning, Central Bureau of Statistics Results of the Agricultural and Livestock Census in Iraq for the Year 1958-1959, Government Press, Baghdad, 1961, Table 2, p. 7.

2 Ministry of Planning, Central Statistical Organization, Results of 1971 Census of Agriculture, Part II, Baghdad, December 1973, Table 2, p. 9.

Note: The original table showed a total number of holdings of 591,049 in 1971. This included 51,982 "holders" without land who appeared in the first size grouping, "less than one". For these data to be comparable to those of the 1958/59 Agriculture Survey (which ignores this group) these landless families have been deducted from the 1971 figures.

In addition, from the slight decline in the Gini coefficients[1] from 0.8814 in 1958 before the agrarian reform programme, to 0.6175 in 1971 we may speak of a movement towards less inequality in land distribution. This can be seen more clearly from the movement in the Lorenz curve from 1958 to 1971 as shown in Figure 1. Though the change has not been dramatic, there has been a limited development towards greater equality, mainly due to the disappearance of the largest estates in 1971. This is represented by the curve's movement towards the line of perfect equality.

D 3 Size of Agricultural Holdings

Land distribution can be analysed by considering the number and/or the size of holdings in the individual governorates (Table 3.12).

According to agricultural censuses of 1958-59 and 1971-72, the total arable land (or holdings area) on a countrywide level has declined from 32.2 million Meshara (1 Meshara = 1 Donum) in 1958 to 22.5 million Meshara in 1971 - a fall of about 30 per cent. This was due mainly to the salt damage to the land that resulted from the inadequate drainage system. Three areas can be distinguished according to the degree of salinity damage. The Southern region suffered most: by the time of the 1971 census less than 55 per cent of the total arable land of 1958 still existed. There was a 35 per cent decline in the Central region and a 13.3 per cent decline in the Northern and least affected area. The North owed its survival to its dependence on a rain-fed rather than a river-based irrigation system.

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1 See the formula used in calculating the Gini ratio on p. 97, which has been adopted; the Y refers to the percentage of holdings' area and X to the percentage of landholders.

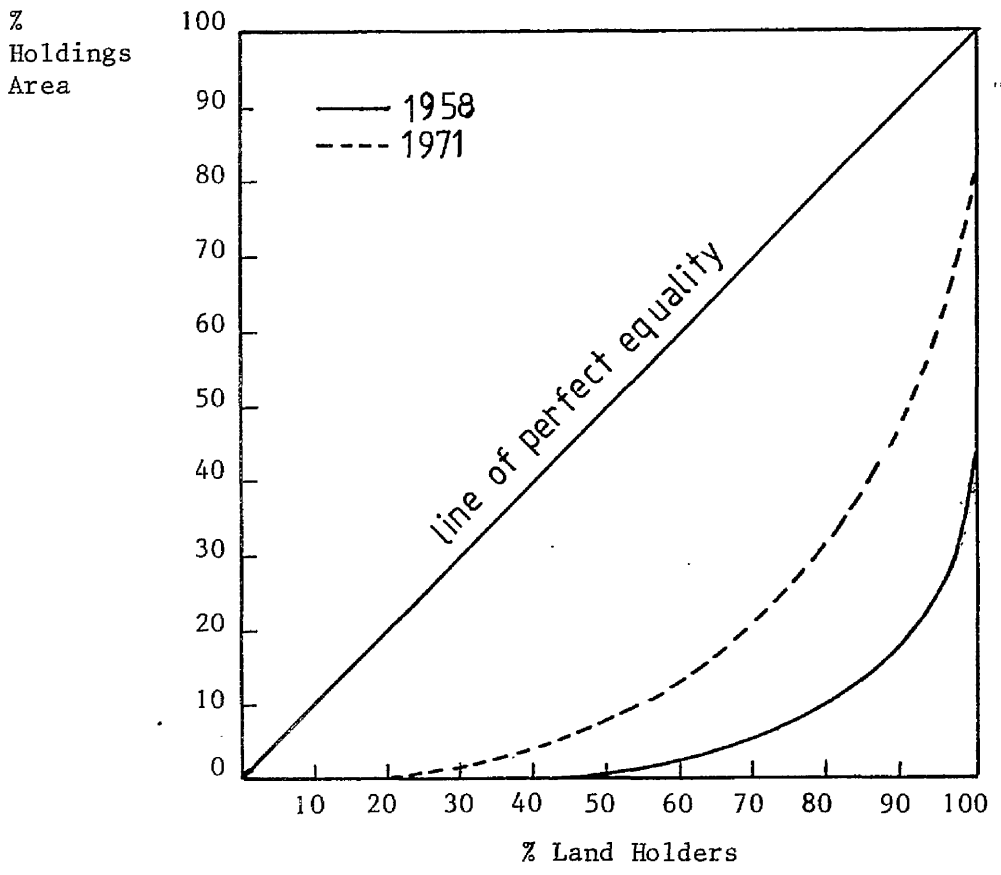

Fig.1: Lorenz Curves for Land Distribution in Iraq, 1958 and 1971
Source: Table (3.11)

TABLE(3.12)
Regional Distribution of Agricultural Land in Iraq, 1958 and 1971.

GOVERNORATES	1958-1959 HOLDING Number	%	AREA Meshara	%	Average size Meshara	1971-1972 HOLDING Number	%	AREA Meshara	%	Average size Meshara
NORTHERN REGION	109835	43.4	14339731	44.6	130.6	229096	38.8	12410903	55.1	54.2
Dhok	(53119)	21.0	(7047462)	21.9	(132.7)	21734	3.7	465825	2.1	21.4
Nineveh						78298	13.3	6596935	29.3	84.3
Sulaimaniya	21760	8.6	1397894	4.3	64.2	47984	8.1	690814	3.1	14.4
Kirkuk	17330	6.8	3497270	10.9	201.8	43720	7.4	2913552	12.9	66.6
Arbil	17626	7.0	2397105	7.5	136.0	37360	6.3	1743777	7.7	46.7
CENTRAL REGION	62747	24.8	10504696	32.7	167.4	182823	30.9	6798490	30.2	37.2
Diala	18376	7.3	3091723	9.6	168.2	34477	5.8	1875749	8.3	54.4
Anbar	10395	4.1	521428	1.6	50.2	18603	3.2	383141	1.7	20.6
Baghdad	8475	3.3	2424461	7.6	286.1	43174	7.3	1575561	7.0	36.5
Babylon	16609	6.6	1544851	4.8	93.0	39820	6.7	1129546	5.0	28.4
Kerbela	5107	2.0	220752	0.7	43.2	12896	2.2	196028	0.9	15.2
Wasit	3785	1.5	2701481	8.4	713.7	33853	5.7	1638465	7.3	48.4
SOUTHERN REGION	80672	31.8	7310386	22.7	90.6	179130	30.3	3299512	14.7	18.4
Qadisiya	(24901	9.8	2532291	7.9	101.7	28825	4.9	999438	4.5	34.7
Muthanna						14437	2.4	364875	1.6	25.3
Thi-Qar	22562	8.9	2260670	7.0	100.1	62770	10.6	1099411	4.9	17.5
Maysan	11116	4.4	2154337	6.7	193.8	42051	7.1	628670	2.8	15.0
Basrah	22093	8.7	363088	1.1	16.4	31047	5.3	207118	0.9	6.7
TOTAL	253254	100.0	32154813	100.0	127.0	591049	100.0	22508905	100.0	38.1

Source: See Table (3.11).

The number of agricultural holdings, on the other hand, increased markedly during this period as a result of agrarian reform. By 1971 the number of holdings had more than doubled over that of 1958 (increasing from 253,254 to 591,049). Holdings in the Central region had increased three times, from 24.8 per cent of the total holdings in 1958 to 31 per cent in 1971. But Northern and Southern regions had the lowest increase in the number of holdings and their proportion of total holdings declined, the North suffering the greatest decline.

With the increase in the number of holdings, the accompanying decline in the average size of holdings can also be seen in the two censuses from 127.0 to 38.1 Meshara per holding. The greatest decline was in the Southern region where the average size of holdings fell from 90.6 to 18.4 Meshara.

On a governorate level, the highest average size of holding in 1971 was in the North: Nineveh was at the top with 84 Meshara per holding, followed by Kirkuk and Arbil. This was due both to political reasons and to the Northern unrest which effectively obstructed the execution of the agrarian reform programme. In 1958, the Central region had the largest average holdings, with Wasit having 713.7 Meshara per holding, Baghdad 286 and Diala 168.2 Meshara per holding. By 1971, the Southern region's agricultural land constituted only 14.7 per cent of the total and the smallest average size of holding was found in the governorate of Basrah (6.7 Meshara per holding).

D 4 Tenure System

Another aspect of the data for the distribution of agricultural holdings that inhibits a comprehensive analysis is the absence of size distribution data for the different forms of tenure and/or ownership within individual governorates. Size distribution data do exist nationally (as shown in Table 3.11).

The regional distribution of agricultural holdings by tenure shown in Table (3.13) reveals that only 48.7 per cent of total holdings are held in some form of ownership such as Mulik Sirf, Tapu, Lazma or according to the agrarian reform law.[1] The remainder is rented (39.6 per cent), and squatted, crop operated or managed by some other form of tenure (11.7 per cent).

The Central region which includes the governorate of Anbar, Baghdad and Babylon has the highest percentage of "owned" holdings. The major proportion of the total owned land in the Central region has resulted from agrarian reform, viz 43.6 per cent in Baghdad and Babylon, 77 per cent in Wasit and 27 per cent in Kerbela. In the case of rented holdings, moreover, three quarters of such holdings in this region are rented from the agrarian reform authorities (in Wasit 96 per cent of rented holdings).[2] The enormous amount of land that remains in the hands of the agrarian

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1 These are forms of right of ownership in Iraq. The Mulik Sirf means "the land which was registered as such in Tapu records, or was so created by a court decree before the execution of Agrarian Reform Law No. 117 of 1970". Tapu, basically, is the land registration office. The land would be authorized by Tapu if it was in the process of registration or it was planted with not less than 40 trees per Meshara for at least 10 years or if it was a result of the reclassification decreed by the courts before 1970. Lazma means land granted by the Heads of Settlement Commissions. Finally, the lands owned in accordance with the agrarian reform law under which the land was distributed to farmers. See further detail in Central Statistical Organization, Results of 1971 ..., op. cit., pp. 230-231.

2 Central Statistical Organization, Results of 1971 ..., ibid, Table 6, pp. 28-33.

TABLE (3.13)
Regional Distribution of Holdings by Tenure, 1971
(Figures in each row are percentage distribution across tenure).

GOVERNORATES	OWNED	RENTED FROM:				Managed by Other Forms	Total
	(1)	Persons	Waquf	Agrarian Reform	Total	(2)	(3)	(4)
NORTHERN REGION	50.7	54.7	4.2	41.1	100.0	43.8	5.5	100.0
Dhok	64.1	82.3	10.4	7.3	100.0	34.4	1.5	100.0
Nineveh	48.3	34.1	3.8	62.1	100.0	46.8	4.9	100.0
Sulaiymaniya	49.2	76.2	2.0	21.8	100.0	45.3	5.5	100.0
Kirkuk	44.0	59.0	4.4	36.6	100.0	45.3	10.7	100.0
Arbil	57.5	51.6	4.6	43.8	100.0	39.5	3.0	100.0
CENTRAL REGION	53.7	20.5	7.2	72.3	100.0	37.5	8.8	100.0
Diala	39.7	16.6	12.4	71.0	100.0	54.6	5.7	100.0
Anbar	77.5	45.8	3.9	50.3	100.0	17.4	5.1	100.0
Baghdad	55.5	17.2	7.0	75.8	100.0	34.3	10.2	100.0
Babylon	64.0	53.8	9.8	36.4	100.0	23.7	12.3	100.0
Kerbela	52.5	19.0	6.3	74.7	100.0	22.3	25.2	100.0
Wasit	41.9	4.0	0.5	95.5	100.0	56.9	1.2	100.0
SOUTHERN REGION	41.0	19.9	4.5	75.6		36.0	23.0	100.0
Qadisiya	58.3	8.2	2.8	89.0	100.0	34.0	7.7	100.0
Muthanna	64.5	40.3	1.4	58.3	100.0	23.2	12.3	100.0
Thi-Qar	20.0	10.8	0.7	88.5	100.0	42.3	37.7	100.0
Maysan	58.0	14.1	0.8	85.1	100.0	36.0	6.0	100.0
Basrah	39.1	51.6	20.1	28.3	100.0	30.7	30.2	100.0
ALL GOVERNORATES	48.7					39.6	11.7	100.0

Source: Central Statistical Organisation, Results of 1971 Census of Agriculture, Part I, Baghdad, 1973, Table 6, pp. 28-29.

reform authorities is chiefly because of problems in registration and division.

In the Southern governorates, more than two fifths of total holdings are owned. In Muthanna and Qadisiya the figure reaches an average of three fifths. The majority of rented land in this region is rented from the agrarian reform authorities.

The Northern region has a comparatively high proportion of rented holdings, and more than half of these holdings are rented from other than the agrarian reform authorities.

It is clear that if, instead of renting the land to the tenants, the land reform authority had conferred ownership rights to tenant cultivators, the 1971 census would have shown a significant redistribution of wealth and a substantial reduction in inequality.

E Regional Distribution of Education and Health Services

In this section we discuss in some detail the distribution of educational and health services by governorates in the years 1960 and 1971. This period has been selected because it coincides with the publication of comprehensive educational and health statistics by governorate.

An important factor affecting income distribution is the rate of improvement in human resources; and the role of government in directing

investment into infrastructure, education and health can have a significant influence on this. The government in Iraq has, at least in the National Plan documents, committed itself to the expansion of education and health services as "an unconditional right for all citizens"[1] as one of its top priorities. This is seen as the key to its policy of fostering social equality.

Government expenditure in 1971 on education and health amounted to I.D. 95 million, which was about 8 per cent of G.N.P. Of this 73.7 per cent was assigned to education.

In this section the following topics are dealt with: education, health services, and the cost of education and health services.

E 1 Education[2]

The structure of the education system in Iraq is roughly similar to that found in other countries. It comprises 6 years of integrated elementary education, 3 years of intermediate and 2 year of secondary education. In the secondary stage, there are facilities for specialization in arts, science and commerce subjects. At this stage there are also two vocational schools, to provide agricultural and technical training.

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1 Ministry of Planning, Planning Board, op. cit., p. 135.

2 According to the population census results, the illiteracy ratio improved from 78.5 per cent in 1957 to 70 per cent in 1965 (57 per cent in the urban areas and 84 per cent in rural areas).

Until 1971 the manpower planning commission devoted most of its attention to the growth of these two types of vocational schools for fulfilling the country's manpower needs.

Higher education has made some progress in the last 10 years, through the expansion of existing institutes and the establishment of new ones.

We will deal with each section of education separately.

E 1 1 Primary Education

The administrative and financial aspects of primary education ceased to be the responsibility of the Ministry of Education[1] from 1965-1966 and were taken over by the Ministry of Internal Affairs. The latter had a direct responsibility for administration of all the governorates.

There is a great disparity between governorates in the distribution of financial and other resources, such as qualified teachers, equipment, etc. This has persisted and resulted in an increase in the inequality of educational facilities as well as educational standards.

Table (3.14) shows the percentage of enrolment, as a proportion of age group, the rate of growth of the number of pupils and the average

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1 There are about 1,852 centres for combating illiteracy, where the number of enrolled participants in 1973 was 106,000 compared with 845 centres and about 46,000 participants in 1960, an increase of 57 per cent. These centres are financed and controlled by the Ministry of Education.

TABLE (3.14)
Regional Distribution of Primary Education Indicators, 1960 and 1971

GOVERNORATES	PERCENTAGE OF ENROLMENT (1)		ENROLMENT AS A PROPORTION OF AGE-GROUP 5-9 (2)		RATE OF GROWTH OF PUPILS NO.	AVERAGE NO. OF SCHOOLS PER 10000 INHABITANTS	
	1960	1971	1960	1971	1960-1971 (3)	URBAN 1970 (4)	RURAL
NORTHERN REGION	23.3	23.2	19.7	15.6	5.1	5	7
Dhok	10.3	2.1	18.8	16.7	5.0	6	4
Nineveh		9.1				4	7
Sulaimaniya	3.2	3.7	20.3	16.0	4.6	6	7
Kirkuk	6.5	4.9	23.2	16.6	6.1	5	8
Arbil	3.3	3.4	16.8	14.4	4.6	7	9
CENTRAL REGION	50.8	55.1	24.9	21.1	5.5	5	5
Diala	5.5	5.3	22.8	19.3	3.5	7	6
Anbar	3.9	3.6	21.1	12.5	4.2	7	8
Baghdad	27.3	33.9	28.1	24.0	6.5	4	5
Babylon	5.9	5.3	21.8	17.0	5.4	7	5
Kerbela	4.7	4.3	28.3	19.3	4.1	6	5
Wasit	3.5	2.7	16.9	14.0	3.0	7	6
SOUTHERN REGION	25.9	21.7	19.9	18.9	1.7	5	4
Qadisiya	6.2	3.5	16.6	14.2	0.7	6	4
Muthanna		1.1				6	3
Thi-Qar	5.6	4.8	17.7	15.5	2.3	5	4
Maysan	4.1	3.0	16.4	13.0	1.1	7	4
Basrah	10.0	9.3	27.9	22.1	2.1	4	5
ALL GOVERNORATES	100.0	100.0	22.1	18.6	4.5	5	6

Source: Column (1): The original figures for enrolment for 1960 from: Ministry of Education, The Results of Educational Statistics for 1960-1961, Baghdad, 1962. Thos figures concern 1971, from: Central Statistical Organization, Annual Abstract of Statistics, 1971, Baghdad, 1974.

Column (2): The number of population in the relevant age-group, adjusted from 1957 and 1970 estimations for 1960 and 1971 respectively. The estimations made by: Kazo Ueda, U.N. Demographer, "Report on Estimates of Population by Governorate for 1957-1980", Baghdad, 10 Aug. 1970, Unpublished Report, Table 17, pp. 28-42.

Column (4): From the number of schools by governorates from: Central Statistical Organization, Summary of the Preliminary Results of 1970 Population Census, Baghdad, Nov.1972, p.50.

number of schools per 10,000 inhabitants in 1970 by urban and rural areas.

There has been a moderate increase in the expansion of primary education. Between 1960 and 1971, the number of primary school pupils grew at an annual rate of 4.5 per cent. What is more remarkable, is the wide disparity between growth rate of various regions. The Southern region was the most sluggish with a growth rate of only 1.7 per cent, and 3 of the 5 governorates achieving lower rates than the overall average for the region. The Central region had the highest growth rate (5.5 per cent), with the Baghdad governorate achieving 6.5 per cent (Table 3.14, column 3).

An important indicator used to measure the disparity between governorates in the provision of primary education and other stages, is the enrolment as a proportion of age-groups.[1] While absolute figures for enrolment show an increase of 16 per cent, there has in fact been a fall of 3.5 per cent in enrolment as a proportion of the primary school age group (Table 3.14, column 2). Regional comparisons show that the Northern region has suffered the greatest drop, and the Southern region the least. The share of total enrolment, of the Central region, already the highest by 1960, showed an increase from 50.8 per cent to 55.1 per cent in 1971 (Table 3.14, column 1) - mainly in the governorate of Baghdad. There was no change in the share of the Northern region, but there was a decline in that of the Southern region.

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1 The available data for 1957 and 1965 population censuses ranged the age-group from 5-9 years and 10-14 years.

Data for the urban-rural distribution of primary schools within each governorate[1], provides surprising results as is shown in column 4 of the above table. In the Northern and Central regions, the average number of primary schools per 10,000 inhabitants was greater in the rural areas, while the reverse is true in the South. This could be explained by the fact that the number of schools is 11 per cent higher in the urban South, and the fact that the rural population as a proportion of total population is higher in the Southern region than in any other region.[2]

Another indicator of inequality, is the results of the 1971 primary school certificate examinations.[3] The best results were in Baghdad, Nineveh and Basrah governorates, which also have a higher teacher-pupil ratio and a higher proportion of qualified teachers.

E 1 2 Secondary and Vocational Education

Despite the expansion in secondary (intermediate and preparatory) education, with an annual growth rate of 11 per cent in the number of students between 1960 and 1971, the inequality in educational opportunity is much clearer than in primary education. About 57 and 63 per cent of the total number of students in 1960 and 1971 respectively, were concentrated in the Central region. Of that, Baghdad governorate alone claimed 42 per cent in 1971. The Southern region, with the exception

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1 Central Statistical Organization, Summary of the Preliminary ..., op. cit., p. 50.

2 This excludes the Basrah governorate. In the North the number of schools in the rural areas is 47 per cent higher than that of the urban areas.

3 Central Statistical Organization, Annual Abstract of Statistics, 1971, Baghdad, 1972, Table 371, p. 523.

of Basrah governorate, had the lowest share of secondary school students (Table 3.15, column 1).

Since enrolment statistics are not available for the 1960 and 1971 period, we have used the total number of secondary students as a percentage of the secondary age-groups, to make regional comparisons. These show a clear improvement nationally, as the proportion increased from 6.6 per cent in 1960 to 14.1 per cent in 1971. In both years, the Central region had more students in the secondary age-groups than the national average, with Baghdad, Diala and Anbar governorates showing the greatest increase during this period (Table 3.15, column 2).

The differences in the growth rates (column 3), between governorates suggests that there is unequal opportunity for further studies for students from different governorates.

As far as vocational education is concerned, the number and type of schools in the country does not correspond to the need for more qualified and skilled workers. There were, during this period, only 13 agricultural schools (one in each governorate, except Basrah and Muthanna in the South and Dhok in the North).

There has been considerable improvement in this field. The Southern region has a higher rate of growth of the number of students in agricultural school than the national or regional rates (Table 3.15, column 3).

Despite the small number of technical schools, there was a decline in this period, both in the number of schools and in the number of students. The schools are unevenly distributed between the

TABLE (3.15)
Regional Distribution of Secondary and Vocational Education Indicators, 1960 and 1971

GOVERNORATES	NUMBER OF STUDENTS %			NO. OF STUDENTS AS A PERCENTAGE OF AGE-GROUP			RATE OF GROWTH 1960-1971 (3)		
	1960	(1)	1971	1960	(2)	1971	Secondary	Agricultural	Technical
NORTHERN REGION	22.6		19.8	5.6		11.2	9.8	5.4	-0.5
Dhok	14.0		0.9	8.1		12.1	7.3	1.3	3.9
Nineveh			8.8						
Sulaimaniya	2.0		2.1	2.8		7.1	11.9	8.1	-4.6
Kirkuk	4.5		5.1	4.6		12.4	12.3	1.7	-2.1
Arbil	2.1		2.9	3.4		10.9	14.2	2.1	0
CENTRAL REGION	57.2		63.1	8.1		17.6	12.0	8.5	0.1
Diala	4.6		5.1	5.4		13.5	12.0	5.2	0
Anbar	4.5		4.2	7.6		16.7	10.6	9.0	0
Baghdad	34.6		41.6	9.7		21.0	12.9	0	-0.8
Babylon	5.7		5.0	7.0		12.3	9.6	0	0
Kerbela	4.4		5.1	8.1		16.8	12.5	0	4.5
Wasit	3.4		2.1	4.9		7.9	6.3	10.7	0
SOUTHERN REGION	20.2		17.1	4.9		9.8	9.4	11.2	-0.9
Qadisiya	13.7		2.9	3.3		9.1	11.4	9.1	1.5
Muthanna			0.9						
Thi-Qar	3.7		2.4	3.7		5.5	6.6	12.9	0
Maysan	3.2		1.9	4.0		6.7	5.8	11.9	0
Basrah	9.6		9.0	7.9		14.9	10.4	0	-2.9
ALL GOVERNORATES	100.0		100.0	6.6		14.1	11.1	8.1	-0.3

Source: See Table (3.14).

governorates and so are the students. For example in 1971, of the ten schools that existed, the Central region, as usual, had the largest share: 3 in Baghdad, one each in Diala and Kerbela governorates. The Northern region had three schools and the Southern region only two. Of the total number of students the Central region again had the largest share (52 per cent) while the Southern region had only 16 per cent.

Nor are the schools equipped uniformly. The Central region's schools have better facilities and equipment and are much larger, especially in Baghdad governorate. The fact that half of the governorates have no provision for technical education, must have serious consequences both in the short and long run.

There are also eight (8) commercial schools, 4 in Baghdad, 2 in Basrah and one each in Nineveh and Sulaimaniya governorates. It is also worthy of note, that primary teacher training schools and other institutes[1] were abolished in the academic year 1970-1971.

E 1 3 Higher Education

In Iraq there were 5 state universities[2], with a total of 43,358 students in 1970-1971, representing 4.7 per cent of the entire population. This compares very favourably with the situation in 1960, when there was only one university - Baghdad - with 11,618 students,

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1 In 1969-70 there were 21 teacher training schools, about two in each governorate with the exception of Baghdad, Nineveh and Basrah. There were also 16 home economics schools, 3 of them in Baghdad, but none in Dhok (in the North) and Muthanna (in the South) governorates.

2 Mustansiriya University and other private colleges were taken over by the state in 1975.

accounting for 0.2 per cent of the population. In 1971, the proportion of female undergraduates was only 20.6 per cent.

There are in Baghdad governorate two universities, absorbing nearly 75 per cent of the national total of students in 1971. Baghdad University alone had half the national number of students. The Northern region had two universities, one each in Nineveh governorate (with 10.5 per cent of the total number of students) and in Sulaimaniya governorate (with 2.6 per cent). Basrah University in the South, with 3,260 students, accounted for 7.4 per cent.

Table (3.16) shows the student intake by university and governorate in 1971. This proves that there is an unequal intake and reflects the obvious preponderance of students from the above governorates (47.6 per cent from Baghdad, 12 per cent from Nineveh and 10 per cent from Basrah). Allowance must, of course, be made for the fact that there is a proportion of students coming from other governorates, but these are included in the figures for the governorate in which the college is located. The last column of the above table shows, the enrolment as a percentage of the 20-24 years age-group, and this shows that 11 governorates had enrolment percentages below the national average which was 1.7 per cent. Compared with the rest of the governorates, young people in Baghdad, Basrah and Nineveh have a greater opportunity for pursuing higher studies.

E 2 Health Services

The medical services were primarily the responsibility of the State, which provided a free health service. Alongside this, however, there were private clinics which catered for those who could pay for extra

TABLE (3.16)
Regional Distribution of Students Admitted to the Universities by Governorate of Birth, 1970/1971.

GOVERNORATES	NUMBER OF STUDENTS ADMITTED TO THE UNIVERSITY OF:								ENROLMENT AS PERCENTAGE OF AGE GROUP
	BAGHDAD	BASRAH	MOSUL	SULAIMANIYA	MUSTANSIRIYA	PRIVATE COLLEGES	TOTAL	%	
NORTHERN REGION	514	2	982	206	374	25	2103	18.3	1.1
Dho'c	39	0	37	11	9	0	96	0.8	1.8
Nineveh	192	1	870	27	254	7	1351	11.7	
Sulaimaniya	69	0	1	73	13	7	163	1.4	0.5
Kirkuk	171	0	52	60	73	6	362	3.1	0.9
Arbil	43	1	22	35	25	5	131	1.1	0.4
CENTRAL REGION	3249	91	586	154	2968	388	7436	64.6	2.2
Diala	195	2	45	44	197	19	502	4.3	1.4
Anbar	161	5	38	6	142	36	388	3.4	1.8
Baghdad	2450	64	353	81	2335	191	5474	47.6	2.8
Babylon	196	6	68	8	143	15	436	3.8	1.3
Kerbela	171	10	51	5	83	114	434	3.8	1.9
Wasit	76	4	31	10	68	13	202	1.7	0.9
SOUTHERN REGION	518	720	157	28	467	74	1964	17.1	1.4
Qadisiya	151	3	30	0	69	50	303	2.6	1.0
Muthanna	30	3	19	0	6	1	59	0.5	
Thi-Qar	143	30	17	17	45	6	258	2.3	0.8
Maysan	88	27	15	6	51	8	195	1.7	1.0
Basrah	106	657	76	5	296	9	1149	10.0	2.2
ALL GOVERNORATES	4281	813	1725	388	3809	487	11503	100.0	1.7

Source: 1. Central Statistical Organization, Annual Abstract of Statistics, 1971, Baghdad, P.549, Table 397.

2. The data concerning Age-group population (20-24 years) by governorate was based on the percentages of this age group as it was estimated by: Koza Ueda, "Report on Estimates of Population by Governorate for 1957-1980", Baghdad, 10 Aug. 1970, (Unpublished Report), Table 17, pp. 28-42.

services. Recently the government has started a new national health scheme in certain governorates, which restricts private practice.

Over the last 25 years of planned development, there has certainly been some improvement in the general standard of health which is reflected in the figures for expectation of life.[1] Such an improvement in the quality and vitality of the people must certainly be considered as essential as investment in physical capital. There remains a need to standardize the quality of the health service and to expand the health education scheme, the foundation of all health programmes, especially in rural areas where nothing has been done in this field so far.

In this section we shall first examine the state of the health service nationally, and then deal with the regional distribution of health facilities. To make comparisons over time we have taken the years 1960 and 1971 for the availability of data.

The Ministry of Health in Iraq employs nearly 26,000 people, spending a monthly average of about I D. million on the wage bill. This accounted for 6.5 per cent of the total wage bill of all government bodies in 1972.[2]

In 1960 there were 1,838 doctors compared with nearly 3,600 in 1971; that is nearly double the 1960 figure. Therefore the trend with regard

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1 It was estimated as 51.6 years, an average for 1965-70, by the U.N. Population Division, Statistical Yearbook, 1975, New York, p. 81.

2 Central Statistical Organization, The Results of 1972 Personnel ..., op. cit., p. 214 and p. 238.

to the number of people per doctor has been largely favourable over the last 12 years: there was one doctor for every 3,600 persons in 1960 while in 1971 the ratio increased to 1 : 2,600.

In the case of nurses, too, the situation improved but only slightly: from one nurse for every 8,000 persons in 1960 to 1 : 5,200 in 1971. The provision of hospital beds increased slightly as well, from 194 to 202 beds per 100,000 inhabitants over the period.

Despite these developments in health facilities in the last 12 years, the health standard in Iraq is still far below that of the World Health Organization which recommends a minimum standard of one doctor for 1,000 persons, one nurse per 500 and one hospital bed per 200 persons.[1]

While these figures for the country as a whole reflect the need for improvement in the health services in general, the existing services themselves are poorly distributed among the 16 governorates. A great disparity exists between the rural and urban areas; most of the doctors, nurses and hospital beds are located in the urban areas.

Table (3.17) shows the 1960 and 1971 regional distribution of the number of persons per doctor, beds per 100,000 inhabitants and the 1971 distribution of health centres and private pharmacies. Column 1 of this table shows the number of doctors per 100,000 inhabitants in each of the governorates in 1960 and 1971. The ratio is highest for the Central

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1 Translating this standard to the 1971 level, the country must achieve an increase of 5,600 doctors and 16,600 nurses to reach the international standard.

TABLE (3.17)
Regional Distribution of Doctors and Hospital beds, 1960 and 1971.

GOVERNORATES	DOCTORS (1)				BEDS (2)				Health Centres and Units and Dispensaries		Private Pharmacies	
	1960		1971		1960		1971		1971		1971	(4)
	No. of Persons per doctor	Doctors per 100.000	No. of Persons per doctor	Doctors per 100.000	Beds per 100,000	Index No. Iraq=100	Beds per 100,000	Index No. Iraq=100	Number	(3) %	Number	%
NORTHERN REGION	7934	12.6	4207	23.8	124	63.9	129	63.9	456	33.9	90	15.0
Dhok	8313	12.0	8683	11.5	136	70.1	112	55.4	31	2.3	4	0.7
Nineveh			3201	31.2					133	9.9	53	8.8
Sulaimaniya	9512	10.5	5805	17.2	98	50.5	112	55.4	104	7.7	10	1.7
Kirkuk	6629	15.1	3886	25.7	107	55.2	118	58.4	99	7.3	19	3.2
Arbil	8039	12.4	5021	19.9	149	76.8	212	104.9	89	6.6	4	0.7
CENTRAL REGION	2908	34.4	1834	54.5	287	147.9	249	123.3	595	44.2	422	70.5
Diala	9202	10.9	3808	26.3	66	34.0	96	47.5	102	7.6	15	2.5
Anbar	6236	16.0	2901	34.5	153	78.9	154	76.2	86	6.4	9	1.5
Baghdad	1758	56.9	1330	75.2	428	220.6	331	163.9	202	15.0	350	58.4
Babylon	8749	11.4	4142	24.7	204	105.2	172	85.1	90	6.7	16	2.7
Kerbela	4395	22.8	2847	35.1	243	125.3	175	86.6	68	5.1	22	3.7
Wasit	10467	9.6	3626	27.6	133	68.6	155	67.7	47	3.5	10	1.7
SOUTHERN REGION	9958	10.0	3996	25.0	113	58.2	173	85.6	295	21.9	87	14.5
Qadisiya	11572	8.6	4085	24.5	58	29.9	128	63.4	60	4.4	14	2.3
Muthanna			3530	28.3					26	1.9	2	0.3
Thi-Qar	18758	5.3	6229	16.1	66	34.0	88	43.6	71	5.3	19	3.2
Maysan	14158	7.1	5249	19.1	177	91.2	270	133.7	52	3.9	8	1.3
Basrah	5773	17.3	2940	34.0	167	86.1	219	108.4	86	6.4	44	7.3
ALL GOVERNORATES	4633	21.6	2562	39.0	194	100.0	202	100.0	1346	100.0	599	100.0

Source: The basic data for the Number of doctors and beds, health centres and pharmacies from : Central Statistical Organization, The Annual Abstract of Statistics 1960, 1971, Baghdad,

region for both the periods; nearly 68 per cent of the total number of doctors in Iraq are working in this region. Of this percentage more than 52 per cent were located in Baghdad governorate alone. To even out these inequalities by bringing the Northern and Southern regions up to the national average standard (of 1971), an increase of 700 doctors (20 per cent) will be required.

The imbalance in the distribution of doctors is a demonstration of two important facts: there are not sufficient doctors and secondly there is no official policy of distributing doctors according to the demands of various regions. While the inequalities in medical services are fairly high between governorates, even higher are the inequalities between rural and urban areas within each governorate.

The regional provision of hospital beds has a similar pattern of distribution. Table (3.17, column 2) shows the number of beds in all types of hospitals for every 100,000 persons in each of the governorates for the years 1960 and 1971. The index number shows how the provision of beds in each of the governorates compares with the national average. Baghdad governorate had 331 beds per 100,000 persons as compared with Arbil governorate (in the Northern region) having 212 beds and Thi-Qar governorate (in the Southern region) having only 88 beds.

The regional distribution of public clinics and health centres - other than hospitals - does not differ much from the distribution of doctors and beds among the governorates. Table (3.17, column 3) shows the share of each governorate in the total health centres and units in Iraq in 1971. In areas where there is a real need for medical services, even these clinics are out of reach of some of the rural population.

These are also the areas where the clinics are least well equipped and where the staff is least qualified.

Column 5 of the above table shows the percentage of pharmacies in each governorate. These pharmacies are mostly private and there is no policy to regulate their location. Although there is no data available concerning the breakdown of pharmacies into the rural-urban areas, all the indications are that the distribution in this respect is heavily biased against the rural areas.

E 3 Cost of Education and Health Services

As we mentioned earlier, in 1971 the total cost of education and health services amounted to I D. 95 million, which is about triple the 1960 cost. The reference to the total cost here includes current expenditure from the ordinary budget by the Ministry of Health and Ministry of Education on salaries paid to teaching and non-teaching staff, expenditure on stationery, medicines, telephone and printing charges, rents, repair and maintenance of buildings and equipment, etc. The figure also includes nearly ID. 4.4 million for 1971 that reflects the cost of new cultural and health projects and buildings financed from the development budget, i.e. the capital expenditure on buildings and equipment. In 1960, the total expenditure on education and health accounted for 37.8 per cent of total government consumption expenditure, falling to 31.5 per cent in 1971. Government consumption expenditure achieved an 11.5 per cent annual rate of growth during the 1960-1971 period, while the growth of education spending was 9 per cent, and that of health spending was 11.9 per cent. There has been a decline in the share of education in total expenditure for services over the period,

from 78.9 per cent to 73.7 per cent, and an increase in the share of services' expenditure allocated to health. The figures for 1960 and 1971 are in each case quoted at current prices.

This expenditure on education and health can be considered both as investment and consumption since a developing country like Iraq, allocating more than eight per cent of its GNP to these areas, must be able to afford and provide education and health for consumption satisfaction as well as considering its higher social return compared with that of other social investments.

Expenditure figures in these sectors are not available at the governorate level, so we have calculated the distribution of education and health expenditure according to three different methods. For education, we have taken 1) a per capita distribution 2) a per household distribution 3) a distribution according to the number of students at all stages broken down into (a) primary and secondary stages (b) universities.[1] For health, we have used the first two measures and the distribution of the number of hospital beds per governorate. We have also taken an unweighted average of these three measures. We are assuming that an average of the three measures will be a safeguard against any bias in any one of them. Table (3.18) shows the 1971 expenditure on education and health distributed in the above ways, and the percentage share of each governorate in both education and health expenditure. This distribution could be of interest in the coming chapters which deal

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1 The statistics for the number of students in each governorate for primary and secondary schools was available, but we have distributed the number of university students according to the percentage share of each governorate in the 1970/1971 enrolment figures.

TABLE(3.18)
Regional Distribution of Expenditure on Education and Health, 1970/1971.

(ID. 000)

GOVERNORATES	EXPENDITURE ON EDUCATION							EXPENDITURE ON HEALTH				
	Per Students											
	Per Capita	Per Household	Primary & Secondary	Universities	Total	Average	%	Per Capita	Per Household	Per Beds	Average	%
NORTHERN REGION	18.958	20.067	14.057	1.698	15.755	18.260	26.1	6.774	7.170	4.418	6.121	24.5
Dhok	1.847	1.847	0.914	0.075	0.989	1.561	2.2	0.660	0.660	0.250	0.523	2.1
Nineveh	6.616	6.723	5.641	1.098	6.739	6.693	9.6	2.364	2.403	1.460	2.076	8.3
Sulaimaniya	3.485	3.972	1.963	0.131	2.094	3.184	4.6	1.245	1.419	0.703	1.122	4.5
Kirkuk	3.957	4.126	3.653	0.291	3.944	4.009	5.7	1.414	1.474	0.837	1.242	5.0
Arbil	3.052	3.399	1.886	0.103	1.989	2.813	4.0	1.091	1.214	1.168	1.158	4.6
CENTRAL REGION	34.026	32.598	34.481	6.078	40.559	35.728	51.1	12.158	11.649	15.280	13.029	52.1
Diala	3.559	3.547	3.010	0.413	3.423	3.510	5.0	1.272	1.267	0.618	1.052	4.2
Anbar	2.403	2.037	2.246	0.319	2.565	2.335	3.3	0.859	0.728	0.668	0.752	3.0
Baghdad	18.774	17.796	21.815	4.465	26.280	20.950	30.0	6.708	6.359	11.183	8.083	32.3
Babylon	3.872	3.714	3.124	0.356	3.480	3.689	5.3	1.383	1.327	1.199	1.303	5.2
Kerbela	2.856	2.830	2.698	0.356	3.054	2.913	4.2	1.020	1.012	0.898	0.977	3.9
Wasit	2.562	2.674	1.588	0.169	1.757	2.331	3.3	0.916	0.956	0.714	0.862	3.5
SOUTHERN REGION	16.975	17.291	12.037	1.605	13.642	15.969	22.8	6.066	6.179	5.300	5.848	23.4
Qadisiya	3.166	3.223	2.071	0.244	2.315	2.901	4.0	1.131	1.152	0.804	1.029	4.1
Muthanna	1.180	1.285	0.642	0.047	0.689	1.051	1.5	0.422	0.459	0.198	0.360	1.5
Thi-Qar	4.118	4.447	2.243	0.216	2.459	3.675	5.3	1.471	1.589	0.655	1.238	5.0
Maysan	2.792	2.944	1.565	0.160	1.725	2.487	3.6	0.998	1.052	1.359	1.136	4.5
Basrah	5.719	5.392	5.516	0.938	6.454	5.855	8.4	2.044	1.927	2.284	2.085	8.3
ALL GOVERNORATES	69.959	69.956	60.575	9.381	69.956	69.957	100.0	24.998	24.998	24.998	24.998	100.0

Source: 1. Central Statistical Organization, "The Government Sector, Expenditure on Education and Health", Unpublished Report, Baghdad, 1974.
2. Data for population: see Table (2.2).
3. See Tables (3.14, 3.15 and 3.16).

Table (3.19)

The Expenditure on Education by Stage of Schooling, 1960 and 1971

(I D. 000)

	1960/1961		1970/1971		Rate of Growth %
	Amount	%	Amount	%	
Primary	14.657	54.6	44.158	63.1	10.5
Secondary	6.461	24.1	10.816	15.5	4.7
Technical	0.374	1.4	0.704	1.0	5.9
Agricultural	0.220	0.8	0.576	0.8	9.1
Universities	2.000	7.4	9.381	13.4	15.0
Cultural Projects	2.235	8.3	2.143	3.1	- 0.3
Others	0.901	3.4	2.178	3.1	8.3
Total	26.848	100.0	69.956	100.0	9.0

Source: 1 Ministry of Finance, The General Accountant Department, The Annual Report for 1960/1961, Baghdad, 1964.

2 For 1970-1971, Central Statistical Organization, The Government Sector, Expenditure on Education and Health, unpublished report, Baghdad, 1974.

with the regional distribution of income.

On a national level, per capita expenditure on education was I.D. 7.6 (i.e. I D. 47.4 per household). Breaking down this expenditure by each stage and type of education as shown in Table (3.19) reveals that the share of primary education rose between 1960 and 1971, achieving a growth rate of 10.5 per cent and the per student expenditure increased from I D. 21.4 to I.D. 39.9. The decline in the share of the secondary stage (as well as in that of technical schools) in favour of higher education was obvious.

Health expenditure per capita has increased also (from I D. 1.1 to I.D. 7.7 in 1960 and 1971 respectively). But this increase is less in absolute terms than that achieved by education expenditure.

CHAPTER IV

Distribution of Income Before 1971 : Surveys and Results

This chapter deals with household expenditure and income surveys carried out in Iraq in the three years: 1954, 1961 and 1968. The first two surveys were conducted by the Bureau of Statistics, while the latter one was part of a research project of Baghdad University conducted by Mansour Al-Rawi.

There were two previous surveys in 1939 and 1946, which are considered to have been the first attempts to survey household budgets in Iraq. But no detailed reports on the coverage or the results are available. The three surveys with which we are concerned are the only ones whose results have been published in detail.

The statistical coverage in all these surveys is limited to Baghdad and its environs. However, being the capital and with a quarter of the population concentrated there it holds a wide range of income-expenditure groups, thus providing valuable data. It therefore enables us to explore the extent of income-expenditure differentials as well as changes in inequality in three periods.

Hence, this chapter will cover the following:

A The Household Budget Enquiry of 1954

B The Household Budget Enquiry of 1961

C The 1968 Survey of Income and Population Problems

D Evaluation and Comparison

A The Household Budget Enquiry of 1954

A 1 Coverage and Sampling

This enquiry is considered to be the first comprehensive household budget survey to be carried out in Iraq. It was conducted during January and February 1954, and covered families living in the city of Baghdad and its environs, such as Khadhimian, Adhamiyah and Tel-Mohammad. As the report of this survey mentioned, "the purpose of the enquiry was to discover in as great detail as possible the way in which households spent their incomes ... ".[1] A further objective was to enable the present labourer's cost of living index to be revised.

Information about income and expenditure was collected so that the Report could claim that "a fairly wide range of incomes has been covered and this will make possible a study of patterns of consumption and expenditure which should be of considerable assistance in economic planning".[2] The coverage of the survey was limited to a small number of households, and it was emphasised that those covered were wage earners receiving twenty Iraqi dinars or less per month. The household was defined "as a group of persons eating at the same table or marketing as a unit".[3] Thus, as will be shown below, in the most recent survey of 1971-1972, such a definition fails to differentiate between the family unit and the household unit.

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1 Ministry of Economics, Principal Bureau of Statistics, Report on the Household Budget Enquiry in the City of Baghdad and its Environs, Al-Sa'adi Press, Baghdad, 1954, p. 8.

2 Ibid., p. 8.

3 Ibid., p. 9.

The survey covered 350 households. Baghdad was divided into two areas, the built-up area, which accounted for 291 households or 83 per cent and the Serifa camps[1] which accounted for 59 huts or 17 per cent of the total households covered. The method used for selecting the latter was less systematic than that used in the built-up area. Data was collected over a period of three weeks. In the first week, the built-up area of Baghdad was covered. In the second week, the districts of Khadhimian, Adhamiyah and Tel-Mohammad, and in the final week the Serifa camp.

The survey report cautioned that the household income data "cannot be regarded as being completely reliable".[2] This could be true of the expenditure data as well. It is generally the case that households tend to understate their income since they suspect that the information might be used for tax purposes. There is also a temptation to over-estimate their expenditure, for status reasons.

A 2 The Distribution of Income in 1954

Average income per household was found to be well below the average expenditure per household. The latter being 36 per cent higher in the built-up area and 43 per cent higher in the Serifa camp area. This naturally qualifies any conclusionsthat might be drawn from the distribution of income obtained.

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1 Before the floods of spring 1954 a large camp had grown up around the eastern outskirts of Baghdad city, consisting of small huts built either of palm matting or of mud which are called Serifa (shanty housing).

2 Ibid., p. 17.

The monthly size distribution of income is shown in Tables (4.1 and 4.2). The data are classified into seven income groups for the built-up area, and five for the Serifa camp area.

Before discussing the results of the tables, it is important to note the difference in average monthly incomes between the built-up and Serifa camp areas. The average income in the built-up area (ID. 13 monthly or ID. 156 annually) was nearly double that of the Serifa camps (ID. 6.9 monthly or slightly less than ID. 83 annually).

The poorest 20 per cent of households in the built-up area received an income share equal to 7.3 per cent of total income, while the share of the poorest 20 per cent in the Serifa camp was 8.5 per cent. But in both areas, the lowest half of the households had apparently similar shares of income amounting to nearly 30 per cent of the total. Thus, the income share of the top half of households was 2.4 times higher than that of the bottom half of households. The evidence suggests that incomes are distributed less unequally in the Serifa camp. The Gini ratio of concentration[1] supports this: the Serifa camp ratio

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1 The method used to calculate the Gini ratio of concentration was based on ranking in ascending order the households and income data in cumulative percentages. These are then plotted on a curve called the Lorenz curve. The ratio of the area between the Lorenz curve and the diagonal - the line of perfect equality -, and the total area below the diagonal is called the Gini ratio of concentration. The ratio equals zero if there is perfect equality and equals one (unity) if there is perfect inequality. Assuming the points on the Lorenz curve are joined by linear segments, this can be expressed as below:

$$\text{Gini Ratio} = 1 - \frac{1}{10000} \sum_{i=1}^{n} (Y_i + Y_{i-1}).(X_i - X_{i-1})$$

Where Y_i = The cumulative percentage of income in income group 1

X_i = The cumulative percentage of households in income group 1

$i = 1, 2, 3 \ldots n$)

for further detail and numerical example see:
William I. Greenwald, Statistics for Economists, New York, 1963, pp. 25-26.

Table (4.1)

Distribution of Income in the Built-up Area, Baghdad, 1954

Household Income (per month I D.)	Number of House-holds	Total Income per month I D.	Percentage of total		Accumulated percentage of	
			Households	Income	Households	Income
	(1)	(2)	(3)	(4)	(5)	(6)
1.000 - 5.000	31	77.500	11.0	2.1	11.0	2.1
5.001 -10.000	77	577.500	27.2	15.8	38.2	17.9
10.001 -15.000	81	1012.500	28.6	27.6	66.8	45.5
15.001 -20.000	55	962.500	19.4	26.2	86.2	71.7
20.001 -25.000	16	360.000	5.7	9.8	91.9	81.5
25.001 -30.000	14	385.000	4.9	10.5	96.8	92.0
30.001 -35.000	9	292.500	3.2	8.0	100.0	100.0
Total	283	3667.500	100.0	100.0		

Source: Calculated from Ministry of Economics, Principal Bureau of Statistics, Report on the Household Budget Enquiry in the City of Baghdad and its Environs, Baghdad, 1954, p. 19.

Table (4.2)

Distribution of Income in the Serifa Camp, Baghdad, 1954

Household Income (per month I D.)	Number of House-holds	Total Income per month I D.	Percentage of total		Accumulated percentage of	
			Households	Income	Households	Income
	(1)	(2)	(3)	(4)	(5)	(6)
1.000 - 3.000	6	9.000	10.5	2.3	10.5	2.3
3.001 - 6.000	19	85.500	33.3	21.6	43.8	23.9
6.001 - 9.000	22	165.000	38.6	41.8	82.4	65.7
9.001 -12.000	8	84.000	14.1	21.3	96.5	87.0
12.000 & over	2	51.300	3.5	13.0	100.0	100.0
Total	57	394.800	100.0	100.0		

Source: See Table (4.1)

in 1954 was 0.2794, and for the built-up areas was 0.3008.

As to the occupational structure, the total number of wage earners in the built-up area was 394, i.e. an average of 1.39 wage earners per household. In the Serifa camp there were 70 wage earners or 1.18 per household. "If these figures are expressed as percentages of the total number of persons above 14 years of age, it is found that the wage earners accounted for one-third of the total in the built-up area and 35 per cent in Serifas".[1]

The average monthly income of wage earners was ID. 9.3 (and per household income was ID. 12.6) in the built-up area; and ID. 5.6 per wage earner (and ID. 6.7 per household) in the Serifa camp. The lower average earnings in the Serifa is explained by the fact that 80 per cent of the wage earners were labourers at the minimum wage level, compared to only 67 per cent in the built-up area. Retailers constituted 4.3 per cent of total earners in the Serifa camp and 12.2 per cent in the built-up area. Nearly 15 per cent of total earners were classified as pedlars.

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1 Ibid., p. 18.

B The Household Budget Enquiry of 1961

B 1 Coverage and Sampling

This survey was carried out by the Central Bureau of Statistics, Ministry of Planning, on 12th December 1961. The main purposes of the survey were stated clearly, unlike those of previous surveys. The first two important points mentioned in the Report[1] were:

1 To get the required information for calculating a new consumer price index for the city of Baghdad and its environs.

2 To provide basic data on the income and expenditure of households.

This survey introduced a new approach to resolving the "statistical frame" by relying on the register of the results of the 1957 population census. Households were selected at random from within chosen groups, using one household to represent every 150 households. In addition, the survey covered the new residential quarter which had been built since the census in 1957.

Furthermore, this survey did not limit its coverage to a specific social class or income level, so that selection was regardless of living standard. Thus 756 households were selected from the various parts of the city of Baghdad (such as Khadhimian, Adhamiyah and Daura). Further 126 households were selected from the Serifa camps by random sampling.

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1 Ministry of Planning, Central Bureau of Statistics, The Household Budget Enquiry in the City of Baghdad and its Environs, Government Press, Baghdad, 1962, p. 1.

From the description of this survey, it is clear that no specific definition was given for the household and the enumerators were given discretion in deciding whether a unit was a household or a family.

The survey started on the 12th of December and ended on the 19th of the same month. As for the Serifa camps, the data were collected during the week 19th - 26th December.

B 2 The Distribution of Income in 1961

The final report of this survey provided few details about household income. It reported that the monthly average income per household in the built-up areas was ID. 55.7 (or ID. 668 a year) and ID. 14.0 (or ID. 168 a year) for the Serifa camp. The former income is nearly four times higher than the latter. It is interesting to note that in the built-up areas the monthly average expenditure per household was slightly above the average income (only 2.6 per cent difference). While the difference between the expenditure and income in the Serifa camp area was very high, expenditure being 26 per cent higher than income.

However, since the size distribution of income was not provided, it was impossible to draw conclusions from this survey about the extent of income inequality in 1961. An alternative is to use the size distribution of expenditure for the built-up areas, since there is an insignificant difference between the expenditure and income figures for that area.

From Table (4.3) which shows the size distribution of expenditure

Table (4.3)

Distribution of Expenditure in the Built-up Area, Baghdad, 1961

Household Expenditure (per month I.D.)	Number of Households	Mean Household Expenditure (I.D.)	Percentage of total		Accumulated percentage of	
			Households	Exp.	Households	Exp.
	(1)	(2)	(3)	(4)	(5)	(6)
Less than 5	116	21.5	15.3	5.8	15.3	5.8
5 & less than 10	268	38.6	35.4	23.9	50.7	29.7
10 & " " 15	174	56.5	23.0	22.7	73.7	52.4
15 & " " 20	75	73.4	9.9	12.7	83.6	65.1
20 & " " 25	42	93.4	5.6	9.1	89.2	74.2
25 & " " 30	31	121.1	4.1	8.7	93.3	82.9
30 & " " 40	27	118.7	3.6	7.4	96.9	90.3
40 & over	23	182.0	3.1	9.7	100.0	100.0
Total	756	57.2	100.0	100.0		

Source: Calculated from Ministry of Planning, Central Bureau of Statistics, The Household Budget Enquiry in the City of Baghdad and its Environs, 1961, Government Press, Baghdad, 1962, Table (13), p. 10.

(on a monthly basis), it emerges that the lowest 20 per cent of households had an expenditure share of 9 per cent of total expenditure in the built-up area, while those in the top 20 per cent had a 39.5 per cent share. This gave a range of difference of 1 : 4.4 between the shares of those at the bottom and top of the distribution. However, the lowest 50 per cent of households had a 29.2 per cent share of total expenditure. This disparity in expenditure when measured by the Gini ratio was 0.2965, which is slightly less than the ratio for the built-up area in 1954.

Regarding the sources of income, the survey found that 84.4 per cent of the total earnings of families living in the built-up area comprised wages, compared to 98 per cent of total earnings in the Serifa camp. In both areas, the percentage of total working persons was identical, around 19.9 per cent of the total number of persons in the households covered by this survey. But the average number of those wage earners per household in the built-up area was 1.5 persons and in the Serifa camp 1.2 persons.

The occupations of wage earners shows that 36 per cent of wage earners in the built-up area held government posts (except labourers), while these accounted for 31.5 per cent in the Serifa camp. Labourers in the service sector were 14.4 per cent of total wage earners in the built-up area and 35 per cent of those in the Serifa camp.

C The 1968 Survey of Income and Population Problems

C 1 The Purpose and Coverage

The Economic and Administration Research Centre of Baghdad University was the body which carried out this survey under the title of "The Relation between Income and Population Problems of the Iraqi Family".[1]

Its purposes were to examine the relationship between family size and, firstly, the income level of the family unit, and secondly, the various income groups in which the families were placed. Its broader aim was to provide the background data for policy measures relating to the problems of those in the lowest income groups.

Like the previous surveys, this one was limited to the city of Baghdad. A random sample method was applied in selecting 608 families in 9 districts, of those 208 families or 34.2 per cent were from one district, Al-Thawra, which is considered to be the poorest district in Baghdad. In the other 8 districts, only 50 families each were selected.

The family was allowed to answer the questionnaire within a period of two days.

The most complete answers to the questionnaire came mainly from the poorest area - which had not been expected. Of the completed answers

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1 Al-Rawi, Mansor, The Relation between Income and Population Problems of the Iraqi Family, Government Press, Baghdad, 1971.

about 40 per cent were from the Al-Thawra district and this was 90 per cent of the questionnaires distributed in the Al-Thawra district. The response rate from the richer areas was 58 per cent.

C 2 The Distribution of Income in 1968

This study was mainly concerned with the relationship between household incomes in Iraq and problems of a demographical nature. There was, therefore, only an indirect interest in the subject of income distribution.

Some assumption had to be made in order to explain the reference in the study to the "number of questionnaires" reported in the text of most of the tables. As no specific definition was given, it is assumed that this refers to the number of households covered.[1] We will, therefore, use the assumed household numbers falling in each of the five income groups, to obtain the size distribution of income together with the reported mean incomes. Table (4.4) shows the size distribution of income for 1968 which reveals that the lowest 20 per cent of total households got about 2 per cent of total income, while the share of income received by the top 20 per cent was 52.7 per cent. This striking disparity in the distribution of incomes means that the top quintile of households had a share of income 24 times higher than the share of the lowest quintile. This high degree of observed inequality coincides with the results of the Gini ratio (0.4934). Such high ratio is very

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1 Consultations, in May 1978 at the University of Baghdad, with the author of the study confirmed the validity of this and other assumptions made in this work.

Table (4.4)

Distribution of Income in Baghdad, 1968

Household Income (per year ID.)	Number of Households	Percentage of total		Accumulated percentage of	
		Households	Income	Households	Income
	(1)	(2)	(3)	(4)	(5)
1 - 199	92	21.6	2.2	21.6	2.2
200 - 499	116	27.3	10.1	48.9	12.3
500 - 899	50	11.8	8.7	60.7	21.0
900 -1499	76	17.9	22.6	78.6	43.6
1500 and over	91	21.4	56.4	100.0	100.0
Total	425	100.0	100.0		

Source: Calculated on the basis of the mean incomes in each income group according to the study reference:
from Al-Rawi, Mansor, The Relation between Income and Population Problems of the Iraqi Family, Government Press, Baghdad, Table (2B).

different from those of other surveys and indicates that the sampling method used in this survey may have been unsatisfactory.

Four categories of educational level are related to annual average income in Table (4.5). It can be seen that there exists a high income differential between those with the highest qualifications (accounting for 31 per cent of total households) and the illiterates and semi-literates. The ratio between the average incomes of the above-mentioned groups was nearly 7 : 1 falling to 3 : 1 between those with a higher level of education and those with only primary school education. This reflects the role of educational factors in affecting the pattern of the size distribution of income.

It is worth mentioning the main finding cited by this study. It concluded that there is a positive relationship between the household size and income level.

Finally, the sampling method and the random selection of certain parts of Baghdad in the 1968 study imposed limitations on the extent to which the study's findings could be considered representative of the country as a whole.

D Evaluation and Comparison

It is debatable whether we can draw many firm conclusions from these surveys, since all of them covered only a very small number of households in Baghdad and in addition, there appeared to be deficiencies in the

Table (4.5)

Educational level and Average Income in Baghdad, 1968

Educational level	Number of Households	Average Income (Annually I.D.)
High	137	1870
Secondary	93	1040
Primary	79	632
Illiterate and Semi-literate	133	263
Total	442	952

Source: Al-Rawi, Mansor, The Relation between Income and Population Problems of the Iraqi Family, Government Press, Baghdad, 1971, Table (3A).

statistical methods used.

However, the results seem to provide some indications and suggestions concerning the overall income inequality. Looking at the Gini ratios (Table 4.6) in these three different years as well as for 1971 for Baghdad - urban area - and for the country as a whole, it appears that between 1954 and 1961 there may have been a very slight decrease in income inequality. But in 1968, the inequality tended to increase sharply, with a high estimated value of 0.4934. This ratio is higher by 0.0898 points for the cash income and 0.1319 points for the adjusted income of the 1971 Gini ratio for the country as a whole. Compared with the ratios for the urban areas of Baghdad, it is much higher than both the cash and adjusted incomes.

This suggests that with development there was a relative increase in the number of those receiving incomes that appear in the top end of the scale. This was chiefly the case in the urban centres where there is a concentration of economic activity and in most cases the private sector was behind the growth in the modern sector in that early period.[1] The phenomenon of widening income inequality during the early stages of development has been shown by many studies in various developed and developing countries, particularly by Kuznets.[2]

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1 See Chapter II, pp. 25-28.

2 Kuznets, S., Economic Growth ..., op. cit.,

Table (4.6)

Gini Ratio of Concentration for Baghdad, 1954, 1961, 1968 and 1971

Area	1954	1961	1968	1971
Serifa Camp	0.2794			
Built-up areas	0.3008	0.2965	0.4934	
Urban - Cash				0.3685
- Adjusted				0.3561
IRAQ - Cash				0.4036
- Adjusted				0.3615

Source: Estimated from Tables (4.1, 4.2, 4.3 and 4.4. The 1971 figures, from Table (5.3) and, Appendix C, Table (C.33).

The socio-economic groups that emerge from the Al-Rawi study[1] indicate an overestimation of the average incomes of those with high qualifications (professionals, technicians, and agricultural employers). Their average incomes were 2.1 and 2.5 times higher than their counterparts in urban Baghdad in 1971. On the other hand, there seems to be an obvious underestimation of the incomes of peasants, farm workers and industrial workers compared with the 1971 average incomes of these groups in Baghdad.

The Al-Rawi study suggests a positive relationship between the household size and income level.

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1 Al-Rawi, op. cit., Table 4A.

CHAPTER V

The Distribution of Income in Iraq, 1971

This chapter presents the overall results of the 1971 distribution of income for the country as a whole and that of urban and rural areas of Iraq. The main sources of data are from the 1971 Household Budget Survey[1], which provides the income data and other information on each household included in the population sample. Thus it is based on cross-sectional data for one year.

The scope of the data, however, must be kept in mind when conclusions are drawn on the basis of the findings. In particular, generalization over time will depend on the degree of stability of the various functional and structural relationships involved. In this respect there have been certain changes in the last few years which may have had a substantial effect upon the distribution of income in the country. These changes are related to the redistribution of agricultural land, the increasing role of the public sector in the economy, coupled with the huge increase in the oil revenues due to changes in oil prices.

The main object of this Chapter, however, is to study the pattern of distribution in Iraq, the degree of the overall income inequality and that of urban-rural areas. We will first consider the coverage, the sampling method of the 1971 survey, the concept of income and some other statistical problems.

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1 See Appendix C.

It was found necessary to make a reconciliation exercise between this study's estimates of personal income and those of the National Accounts. This will show the extent of the differences between the two estimates.

Thus this chapter will include six sections as follows:

A Household Budget Survey of 1971-1972

B The Concept of Income

C Some Statistical and Conceptual Problems

D Reconciliation of Personal Income and National Accounts Estimates

E Distribution of Income for Iraq, 1971

F Distribution of Income by Urban and Rural Areas of Iraq, 1971.

A Household Budget Survey of 1971-1972

A 1 Coverage and Scope of the Survey

This survey is considered to be the most comprehensive survey of its kind carried out in Iraq up to the present time.[1] The objective of the survey was to examine the pattern of living standards in the country, through the analysis of the structure and pattern of expenditure and income in general and its distribution within each governorate and between urban and rural areas.

The need for such data stems from the adoption of development targets which explicitly incorporate equity considerations. For planning at both regional and national levels data on each region's expenditure and income is needed. However, this only became available in 1974 with the publication of the results of the survey of expenditure for 1971-1972.

The need for such a survey was also felt for a comparison of the components of private consumption expenditure within the 16 governorates or regional administrative units of the country and to compare Iraq with other economically similar countries.[2]

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1 Beginning in January 1976, the Central Statistical Organization initiated a new Household Budget Survey, covering the whole country over a full calendar year. Up to May 1978 the aggregated results of both expenditure and income were still being processed and had not yet been published.

2 Appendix C (Table C.58) shows this study attempt to present a comparison between Iraqi degree of income inequality and other oil producing countries.

As pointed out above, the household budget enquiry of 1961 was restricted to Baghdad, the national capital, and thus did not represent a large enough sample of the population of Iraq nor was it comprehensive enough for planning purposes. To achieve the latter objective, the Central Statistical Organization and the Ministry of Planning in 1971-1972 conducted this national survey, covering the 16 governorates of Iraq. The field survey was initially conducted by grouping the country into three major divisions as follows:

1 The Northern area which comprises the governorates of Dhok, Nineveh, Sulaimaniya, Kirkuk and Arbil;

2 The Central area, comprising Diala, Anbar, Baghdad, Babylon, Kerbela and Wasit governorates;

3 The Southern area, composed of the governorates of Qadisiya, Muthanna, Thi-Qar, Maysan and Basrah.

Each of the above governorates covered in the field survey was divided into urban and rural areas. For the urban areas, household units situated within municipality limits, or areas considered as urban, were classified under this group, while other household units outside such areas were considered rural. These urban and rural concepts had been adopted in the census of population and social statistics conducted in 1965 and 1970.

The survey was conducted in three stages covering certain seasons of the year. In each season a month was selected to represent the household expenditure and income for the entire season. It was felt by the planners of the survey that the months selected represented the major seasons of the year.

It was further felt that selection of specific months in each

season for the conduct of the survey would allow observation of seasonal fluctuations in household expenditure and income at both the personal and regional level.

A 2 Sampling Method

The survey is based on a stratified systematic cluster multistage model. Application of the above model was based upon a defined "statistical frame", that is,the Iraqi population census conducted by the Central Statistical Organization in 1970.[1]

Households in Iraq were divided into two groups - urban and rural. The household was considered as the sampling unit, defined as "an individual or a group of individuals who participate in providing food and other necessities of life and share a common budget".[2]

The sample was taken on the basis of two households per 1,000 of total households located in the urban area and one and a half per 1,000 of the total households situated in the rural area.

The number of households in the sample for both the urban and rural areas amounted to 1,600 and 1,000 households respectively, as shown in Table (5.1). The above household population was covered in both the first and second stages; for the third stage, the coverage

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1 Central Statistical Organization, Summary of ..., op. cit.

2 Central Statistical Organization, Preliminary Report on the Setting up and Execution of the Comprehensive Household Budget Survey, 1971-1972, Baghdad, 1974, p. 2.

Table (5.1)

Regional Distribution of the 1971-1972 Survey's of Household Population Sample

Governorates	Urban		Rural	
	Number of Households	%	Number of Households	%
North	350	21.9	375	37.5
Dhok	25	1.6	50	5.0
Nineveh	125	7.8	100	10.0
Sulaimaniya	50	3.1	75	7.5
Kirkuk	100	6.3	75	7.5
Arbil	50	3.1	75	7.5
Central	925	57.8	325	32.5
Diala	50	3.1	75	7.5
Anbar	25	1.6	25	2.5
Baghdad	650	40.6	75	7.5
Babylon	50	3.1	75	7.5
Kerbela	100	6.3	25	2.5
Wasit	50	3.1	50	5.0
South	325	20.3	300	30.0
Qadisiya	50	3.1	75	7.5
Muthanna	25	1.6	25	2.5
Thi-Qar	50	3.1	100	10.0
Maysan	25	1.6	50	5.0
Basrah	175	10.9	50	5.0
Total	1600	100.0	1000	100.0

Source: Central Statistical Organization, Preliminary Report on the Setting up and Execution of the Comprehensive Household Budget Survey, 1971/1972, Baghdad, 1974, pp. 3-4.

was restricted to 40 per cent of the sample population. A list of all addresses of households of Iraqi nationals was used. This list is identical to the "Houses and Agricultural Holdings and Enterprises Survey" which was part of the population census of 1970.

In applying the systematic sampling approach, a primary unit was chosen first and then the elements in the sample for each primary unit were selected. As an illustration of the above procedure, the smallest administrative unit in Iraq, the "Nahia" was taken as a primary unit. A list of all Nahias was drawn up and classified according to their governorate. The number of residents in a household in each of the Nahias was taken into consideration and a weight of 100 households was assigned to each Nahia.

The sampling fraction was calculated as follows:[1]

Number of households in rural areas	662,500
" " weighted units	6,625
" " primary units selected	40

Sampling fraction in the first step = 165.6 (i.e. $\frac{6625}{40}$)

Using random tables, 102 primary units were drawn. Applying the systematic sample method described above the sampling fractions of 166 and 165 were alternately added to the cumulative total by interchange added to 102, for finding the following primary units (102 + 166 = 268, 268 + 165 = 443, 433 + 166 = 599 ... etc.).

In the conduct of the field survey, for example, in Dhok governorate,

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1 See for further detail, Ibid., pp. 2-5.

the city of Zako was selected as an urban area, while Berwarybala and Sorjieh nahias were considered rural areas. Numbers of primary units were apportioned with 64 for urban areas and 40 for rural areas.

The list of households was used as a statistical frame in the second step. For each primary unit five elements were selected. For example, in Berwarybala Nahia, the 5th elements selected are as follows:

Number of households in this Nahia		2,243
" " elements which might be selected		5
∴ Sampling fraction	=	448 (i.e. $\frac{2243}{5}$)

By adding 448 to the first element (derived from random tables), we arrived at the second element ... etc.

The 5 selected elements give the addresses of households, taken to be the centres of 5 groups. Each group had 5 households, the main one selected, plus two households registered in the list before it and a further two households registered after it.

In addition, a selection of two other households was made, as a reserve for substitution in case of absences or difficulties in collecting the data from the 5 households. The number of households in each group and the number of the groups in each selected Nahia were determined on the basis of the experience gained in the pilot survey. This was carried out in Al-Mahmudiya - part of the rural area of Baghdad - and as a result in the rural areas (and also in a similar way in the urban areas) the sample comprised five villages in each selected Nahia, and 5 households in each village.

Since the number of the households selected related to the total number of residential households in the area, if the area was highly populated then its share would increase proportionately.

This stratified systematic cluster multistage method was preferred to the simple random sample approach because it allowed the sample to distinguish between the urban and rural areas, reducing the sampling required in the latter. Secondly, the use of clustered households reduced field work costs.[1]

B The Concept of Income

The definition of personal income used in this survey was money income from all forms of activity before the deduction of taxes but including income in kind, produced and consumed by households in rural areas, imputed rent in urban areas, and pensions, gifts and charities in cash and in kind.[2]

In this study we will refer to two types of income: cash income refers to money income while adjusted income involves the addition of imputed rent and income in kind to the cash income.

The relation of the concept of income as used here, to that adopted in the national accounts is as follows:

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1 See Central Statistical Organization, Preliminary ..., Ibid., p. 2.

2 See Baster, N., Distribution of Income and Economic Growth, Concepts and Issues, United Nations, Research Institute for Social Development, Geneva, 1970, pp. 8-9.

Gross Domestic Product - at market prices -

less (-) factor incomes from the rest of the world (Net)

less (-) Indirect taxes (Net)

less (-) Provisions for the consumption of fixed Capital

less (-) [Savings of Enterprises and Direct Taxes on Enterprises + Government property Income]

less (-) Pensions, gifts and charities

plus (+) Current transfers from the Government and abroad

= Personal Income.

In comparison with the definition used in this study, the above approach has some differences which are identified below.

1 Some of the items included in the definition such as pensions are not income, in the sense that they do not result from economic activity. However, according to the household budget survey, they ought to be included. The other items are gifts, charities, etc., whether from relatives, friends or from any other source. These are transfer payments which appear on the expenditure side of the household budget but which represent income to the recipient. In the survey such gifts and other transfers were not very significant constituting only one per cent of total income.

2 The other item which needs clarification is the allowances set aside for the consumption of fixed capital (i.e. depreciation) from the income accruing to employers and self-employed in both the agricultural and non-agricultural sectors. This was not deducted from the incomes of those employers and self-employed in agriculture.

Similarly, no deductions were made for depreciation from the incomes of the self-employed in the non-agricultural sector, which includes small traders, or those owning small businesses. Possibly some allowance for depreciation was made for those employers - or household heads - in the high income bracket engaged in manufacturing and other economic activities, but unfortunately, the survey was not explicit on this point.

3 Property income, comprising rent for houses or land rented to others, as well as imputed rent for owner-occupied houses in the urban areas, have been recorded on the basis of a gross rent concept and no allowance was made for maintenance or repair.

With the above considerations in mind we have arrived at the concept of "gross personal income" which, including current transfers to the household, is the definition adopted in this study.

C Some Statistical and Conceptual Problems

The study of the overall income distribution in Iraq encounters conceptual and statistical problems that require clarification. The concept of annual income used in studying the distribution of income is based on scaling up by six the monthly household incomes of both June and December 1971. Since the sampling fraction differs in the urban areas from that in the rural areas it was necessary to weight the findings from both areas to ensure their correct representation when extracting combined aggregates for the country as a whole.

There is still much discussion over the selection of the household, family or individual, as the unit for assessing distribution of income in the developing countries. However, all these distributions, by household, family and by individual, have their usefulness. Determining the distribution of income by individual, however, presented considerable difficulties due to the quantity of data required, the problem of collection, and determining the share of each individual in household income.

Hence there exists in the literature an emphasis on the distribution of income by household rather than by individual and this "signifies distribution among consuming units, in which the productive capability of the individual is replaced by the capacity to spend or to utilize the income".[1] The household as a consuming unit is also important for measuring the inequality of income distribution. As access to data on the size of households became available it was also possible to obtain a distribution of income by individuals.

Finally, the distribution of income will be discussed in both cash and adjusted income terms.

The conceptual and statistical problems involved in the study will be treated at the outset.

1 The first difficulty encountered was in estimating and

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1 Gannagé, E., "Distribution in Underdeveloped Countries" in J. Marchal and B. Ducros, The Distribution of National Income, Macmillan and Co. Ltd., London, 1968, p. 329.

collecting data on some components which have no automatically quantifiable value. On what basis is one to impute a rent in rural areas where no market exists for the accommodation in question? It is difficult to ask a peasant how much he thinks he could rent his Serifa or mud hut for, when there is not, and never has been, a prospective tenant. It remains necessary to include such an item if it is to be considered a part of income. On the national level the National Accountant ought to make such an estimation in terms of the net rental value of dwellings whether rented or owner-occupied.

It is agreed that "almost all rural dwellings are owner-occupied, and no direct information on their average rental value was available, since such rent in its pure sense, is very rare".[1] It was also accepted that this element should be included in the definition of income; that it should "either have a definite monetary price or cost or can be given one by imputation".[2]

But with such problems the imputation of a rent to be included as part of income in the rural areas did not prove possible.

2 One then encounters the difficulty of treating income transferred from one governorate to another, due to capital or land owned by people living in a governorate other than the one in which the factor of production is employed.

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1 Haseeb, K., The National ..., op. cit., p. 151.

2 Ibid., p. 109.

This problem arose in both the calculation of GDP in each governorate and of personal income in the household budget survey; it produced difficulties in both rural and urban areas. The enormity of this problem in rural areas due to the non-availability of data led us to ignore it. It must be remembered, however, that the problem caused for absentee landlords by aspects of agrarian reform which forced them to settle on their own land to avoid its confiscation or squatting have tended to minimize the distortion that our treatment may have caused. The chief transfers concern oil income and mainly affect urban areas though attributed to the oil-producing governorates. Oil income does not affect the residents of oil-producing governorates directly and its indirect effect is likely to be a benefit to the country as a whole. Where the wage and salary earners reside in the governorate in which the oil production takes place, no problem is encountered.

3 The third problem was the evaluation of the subsistence output produced for the household's own consumption. On a national level, the ex-farm price is supposed to be the price which is used in evaluation of all agricultural output. (Ex-farm price = Retail price - (Trade margins + Transportation Cost).)

The regional differences in the trade margins and transportation cost made it difficult to estimate farm prices in each village or governorate covered in the survey, since this would have led to higher margins of error.

It was decided, therefore, to use wholesale prices to evaluate the self-consumption of the household for the different kinds of agricultural product, since such prices are available. The

assessment of household consumption was made in the office where questionnaire responses were checked.

The household was taken as the basic unit for the distribution, and the number of individuals in each household was recorded. There were some cases in which there were more than one person in the household earning income. This will be dealt with in the section treating different income sources within one household.

These data problems need to be kept in mind when assessing the results of the survey.

D Reconciliation of Personal Income and National Accounts Estimates

The National Accounts Department of the Central Statistical Organization usually estimates the aggregate personal income as a residual from GDP and other components, which are estimated by the whole framework of the National Accounts System. There is no alternative to this procedure since some variables at a macro-level in the economy are roughly estimated rather than being accurately imputed or calculated. The main reason for this is the absence of data for the expenditure or income approaches to estimating GDP.

As already mentioned, the size distribution of personal income in 1971 that emerged from this study is the result of data collected within the Household Budget Survey of 1971, carried out by the Central Statistical Organization. The size distribution of personal income

was on an annual basis and has been broken-down into urban and rural areas. The size distribution of income by household in the urban and rural areas offered the following breakdown as shown in Table (5.2). According to these 14 income groups the percentage share of households in each of these income groups is estimated.

Table (5.2)

Distribution of Household Income in Urban and Rural Areas of Iraq, 1971

Income Groups (per year I.D.)	Percentage Shares of Households in	
	Urban areas	Rural areas
1 - 99	0.6	0.8
100 - 149	1.8	3.2
150 - 199	4.8	6.4
200 - 249	7.4	9.4
250 - 299	7.6	10.3
300 - 399	17.2	17.5
400 - 499	13.2	15.0
500 - 599	10.5	9.6
600 - 699	7.1	8.0
700 - 799	5.8	5.2
800 - 899	4.4	3.0
900 - 999	3.6	2.9
1000 - 1249	6.0	3.9
1250 and over	10.0	4.8

Source: See Appendix C

With 673 and 802 thousand households in the rural and urban areas respectively in 1971, we assumed that these households had similar patterns of distribution to those found in this study. So, with the average annual adjusted income available for each income group, the

total gross personal income was reached. For the country as a whole, gross personal income is estimated at ID. 851.3 million in 1971. The rural area's share of this total was 40.5 per cent.

Before discussing the differences between and the reconciliation of the approach of our estimation and that of the National Accounts in the Central Statistical Organization estimates, the method used in the latter needs to be clarified. The aggregate personal income figure for 1971 of the Central Statistical Organization was estimated as follows:

GDP (at market prices)		1483.9
(-) factor income from the rest of the world (Net)	(-)	1214.9
GNP (at Market prices)		1269.0
(-) Indirect Taxes (Net)	(-)	86.5
GNP (at factor cost)		1182.5
(-) Provisions for the Consumption of fixed Capital	(-)	78.8
Net National Income		1103.7
(-) (Saving of Enterprises + Indirect Taxes on Enterprises + Government property Income)	(-)	370.3
(+) Current Transfer from Government & abroad	(+)	30.3
= Personal Income		763.7

This approach compared with the definition of personal income discussed in the foregoing section needs further qualification:

1 Allowances for the depreciation of fixed capital were not made in this study while they are incorporated in the official figure. This amount was around ID.. 78.8 million in 1971. Hence, if depreciation is added to the aggregate personal income of the Central

Statistical Organization the figure becomes ID. 872.5 million.

2 Evaluation of income in kind was made on the basis of wholesale prices, but this should really be on the basis of ex-farm prices as adopted in the National Accounts. The difference between cash income and adjusted income in rural areas was 27.2 per cent; this identifies the amount of agricultural product produced and consumed by the rural population. Applying this percentage to the share of rural areas as a whole in our personal income estimates, we find that ID. 93.9 million is the amount that may be considered as income in kind. This incorporates a trade margin and transportation costs which may vary between 20 per cent and 33 per cent and this could amount to between ID. 18.8 and ID. 30.8 million.

3 The total of government pensions and cost of living allowances paid in 1971 was ID. 22.5 million (to both civil and military pensioners). Pension payments are included in the survey. However, such transfer incomes are not included in personal income in the National Accounts, and thus there is a difference between personal income in the National Accounts and in the survey.

With these adjustments, the differences in the estimates of personal income ranged between one and six per cent, depending on the combinations. The greatest differences arise when the addition of (1) and (3) (i.e. depreciation and pensions) are made to the Central Statistical Organization figure.

Because of the differences in data source, one cannot expect identical results. The figures appear close enough, however,

to enable useful comparisons to be made.

With regard to GNP at factor cost, the inclusion of these items can lead to an eight per cent difference between the National Accounts and our estimate from this survey.

What emerges from this section is that the findings for income distribution at different levels (for the country as a whole, for the urban-rural areas, and on a governorate level) show little bias in under- or over-estimation of personal income.

It is not possible to establish a similar reconciliation at any level other than the national aggregate personal income.

E Distribution of Income for Iraq, 1971

E 1 Distribution of Income by Households

The household, in its role as both producer and consumer, was the unit commonly used as an important measure of the inequality of income distribution. The debate continues, however, as to whether it is the household or the individual that should be regarded as the basic unit for assessing income distribution.[1]

The sample includes 2,600 households (1,600 in the urban and

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1 Kuznets, S., "Quantitative Aspects of the Economic Growth of Nations: VIII Distribution of Income by Size", Economic Development and Cultural Change, Vol. XI, No. 2, Part II, January 1963, pp. 3-8.

1,000 in the rural areas) weighted in proportions 1 : 1.382 respectively in Table (5.3). The table presents the income distribution in the country as a whole and classifies the households according to 14 income groups for both cash incomes and adjusted incomes. The table highlights some important points. The first is that there is a greater income difference between those in the top and bottom brackets when one considers adjusted rather than cash incomes: the inclusion of imputed rent and income in kind increases inequality. There were only 0.7 per cent of total households earning ID. 70 per annum in 1971, while at the higher level of adjusted income, 7.6 per cent of households had an average income slightly below ID. 1,750 per annum. The number of households in the lowest income group is very small and is comprised mainly of the landless, the unskilled workers and those employed on small holdings.

The difference in the average income between the top and bottom brackets was approximately in the ratio of 23.5 : 1 in cash income and 25 : 1 in adjusted income.

The second point is that most households are concentrated in the centre of the distribution. For cash income, nearly half of the income units are found in the income groups ID. 200 - 499, and nearly 60 per cent in the income groups ID. 200 - 599 for adjusted income. This is illustrated by the frequency distribution in Figure 2 which shows the number of income recipients in each income group. In this distribution the figures are standardised so that they correspond to income groups of the same length. This sort of presentation is useful, but it does not do full justice to the tails of the distribution.[1]

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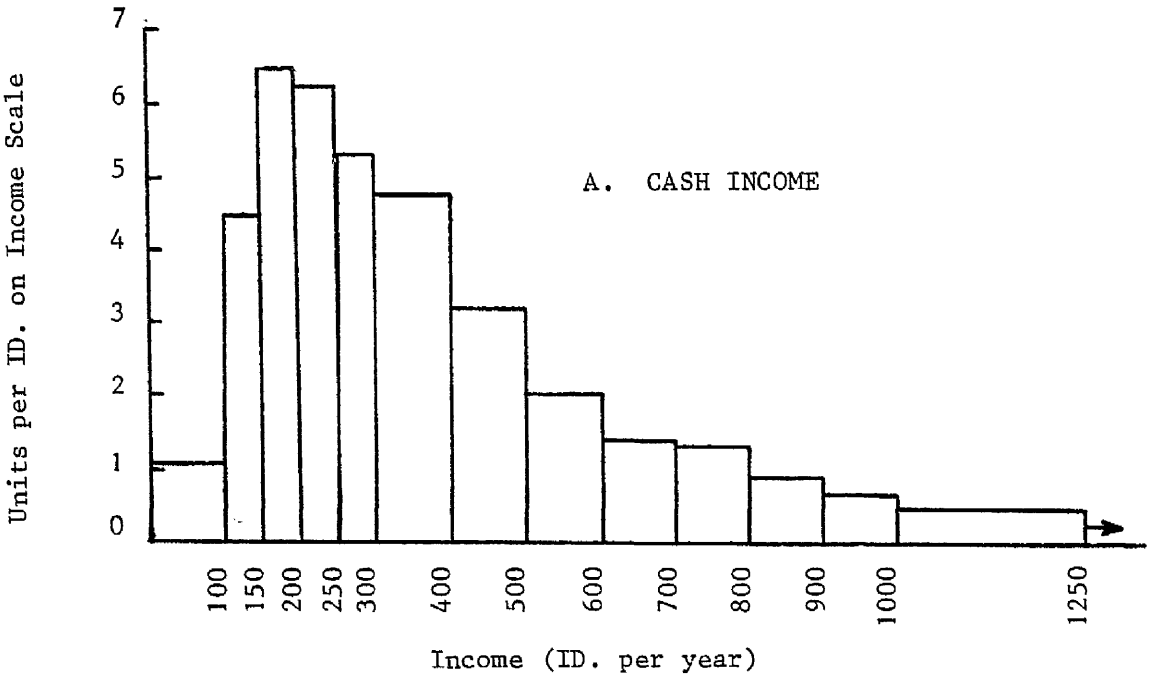
1 Atkinson, A.B., The Economics of Inequality, Clarendon Press, Oxford, 1975, pp. 12-13.



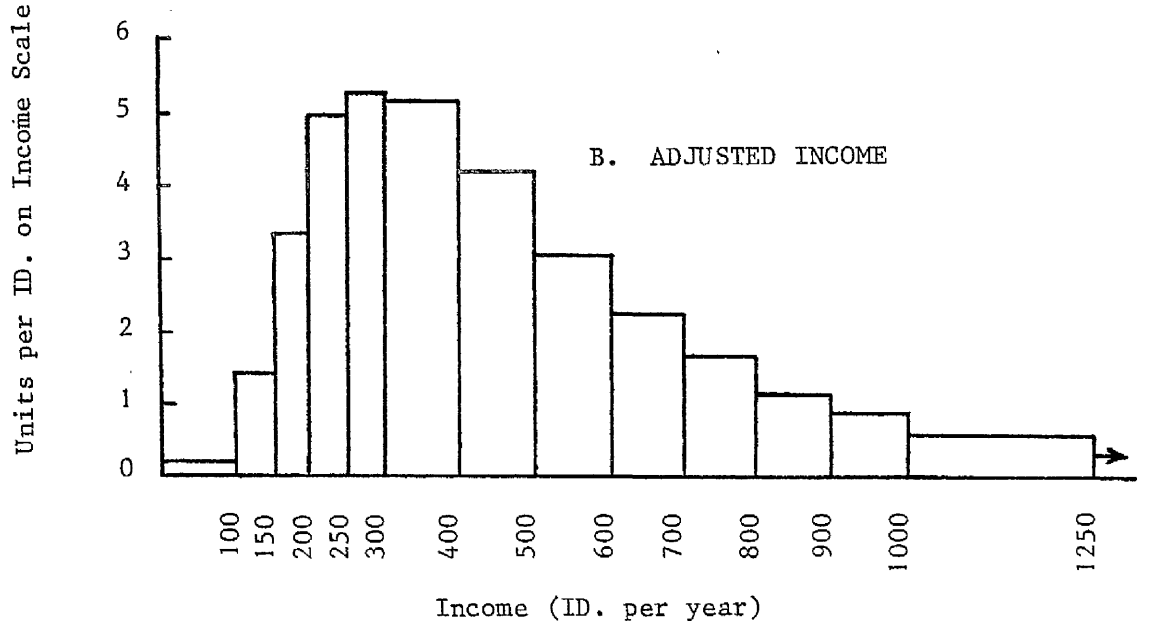


Fig.2: Frequency Distribution of Incomes by Households in Iraq, 1971
Source: Table (5.3)

TABLE (5.3)
Distribution of Income by Households in Iraq, 1971

INCOME GROUPS (Per year ID.)	CASH INCOME				ADJUSTED INCOME			
	Number of Income Units	Average Incomes (per year ID.)	Percentage of Total Income Units	Percentage of Total Income	Number of Income Units	Average Incomes (per year ID.)	Percentage of Total Income Units	Percentage of Total Income
1 - 99	113	71.8	3.8	0.6	20	69.5	0.7	0.1
100 - 149	223	124.3	7.5	2.0	71	126.7	2.4	0.5
150 - 199	324	176.2	11.0	4.1	163	175.8	5.5	1.7
200 - 249	312	224.3	10.6	5.1	245	224.8	8.3	3.2
250 - 299	267	273.0	9.1	5.3	259	272.8	8.8	4.2
300 - 399	481	345.0	16.4	12.1	510	348.8	17.4	10.5
400 - 499	322	449.0	11.0	10.5	411	451.0	14.0	10.9
500 - 599	204	548.8	6.9	8.1	298	547.1	10.1	9.6
600 - 699	143	641.5	4.9	6.7	219	643.2	7.5	8.3
700 - 799	126	749.1	4.3	6.9	162	751.4	5.5	7.2
800 - 899	84	851.9	2.9	5.2	111	846.3	3.8	5.6
900 - 999	67	947.3	2.3	4.6	97	946.9	3.3	5.4
1000 - 1249	114	1110.8	3.9	9.2	149	1111.4	5.1	9.7
1259 & over	160	1690.7	5.4	19.6	224	1747.8	7.6	23.1
TOTAL	2939	468.1	100.0	100.0	2938	576.9	100.0	100.0

Source: See Appendix C

To the left it is possible to find households with negative income, while to the right of the distribution it covers the highest levels of household income in the country.

The income group ID.. 300 to ID. 399 includes the highest number of income units in both cash and adjusted income. The frequency distribution shows clearly that there are more income units in the lower cash income groups than in the adjusted income groups. In addition, the most common frequency is around ID.. 200 for cash income and around ID. 300 for adjusted income. In both of these cases, the incomes were not much below the national average, which is ID. 468 in the former and ID. 577 in the latter. Broadly speaking, those households found below the average accounted for 76.3 per cent for cash income. This percentage is lower for adjusted income, where it is 67.2.

However, with the average size of household for the country as a whole being 7.1 persons, the estimated average per capita personal income is ID. 81.3. In comparison with the per capita personal income estimated by the National Accounts (Central Statistical Organization) which was ID. 78.3 in 1971, our estimation is higher by 3.6 per cent. This discrepancy is explained by the different definitions used.

Reference should be made also to an alternative means of presenting and interpreting the data of the overall distribution of income. This is shown in Table(5.4). Here, all households are divided into equal groups each containing 10 per cent of all households. These groups range from those households with the lowest incomes to those with the highest incomes. It seems that adjusted incomes are more equally

Table (5.4)

Percentage Income Shares of Deciles of Households, 1971

Deciles of Households	Percentage Income Shares			
	Cash Income		Adjusted Income	
	Non-cumulative	Cumulative	Non-cumulative	Cumulative
1st	2.2	2.2	2.8	2.8
2nd	3.6	5.8	4.2	7.0
3rd	4.6	10.4	5.3	12.3
4th	5.5	15.9	6.0	18.3
5th	7.1	23.0	7.3	25.6
6th	7.7	30.7	8.3	33.9
7th	9.7	40.4	9.9	43.8
8th	12.5	52.9	12.1	55.9
9th	16.9	69.8	16.4	72.3
10th	30.2	100.0	27.7	100.0

Source: See Appendix C.

distributed than cash incomes. The highest 10 per cent of households have cash incomes about 13.7 times those of the lowest 10 per cent of households, while the factor is only 9.9 in the case of adjusted income.

The highest (top) 50 per cent of the households get 77.1 per cent of the total cash income and 74.4 per cent of the total adjusted income. This means that they get 3.4 times the cash income of the lowest 50 per cent of the households and 2.9 times the adjusted income of the lowest 50 per cent of households.

Income rises rapidly through the first three deciles at the lowest end of the scale (from first to second, 33 per cent; from second to third, 21 per cent). This influences the overall inequality which is further exacerbated by the fact that the differences continue to be in this order of magnitude at the top end of the scale (a 41 per cent increase between the ninth and tenth deciles of adjusted incomes).

As a result, the entire lower half of the distribution receives only 25.6 per cent of adjusted income, and thus there is an unusually sharp split between the two halves of the distribution.

The characteristics of these distributions and their differences can also be observed from Figure 3, in which Lorenz curves for the cash and adjusted incomes have been plotted. The further the curve deviates from the diagonal, the more unequal is the income distribution. The conventional index of inequality is the Gini coefficient. This is the area between the diagonal and the Lorenz curve, as a fraction of the total area below the diagonal.

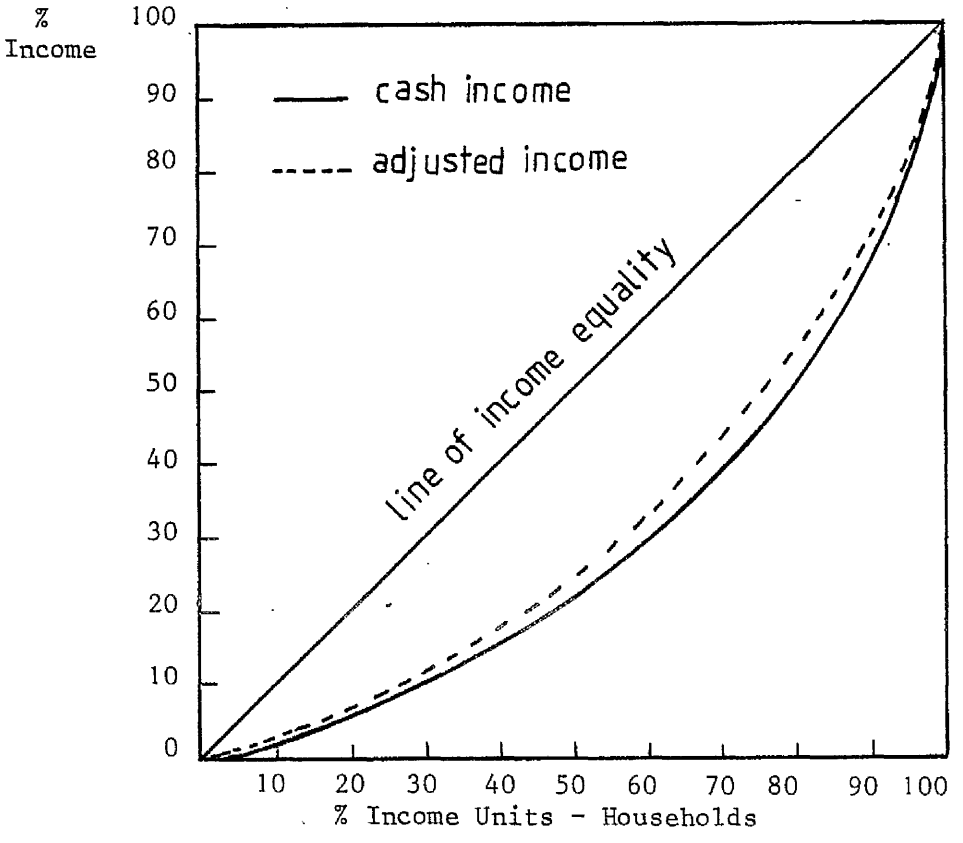


Fig.3: Lorenz Curves for Income Distribution in Iraq, 1971
Source: Table (5.3)

The index varies from zero, showing perfect equality, to unity, showing absolute inequality. The cash income Gini coefficient is 0.4035, while for adjusted income it is 0.3615.

E 2 Distribution of Income by Individuals

In this context a great deal has been made of the difference between the income distribution of individuals and that of households. Taking the individuals as the basic unit for estimating the distribution implies that this unit is a function of the size of household, since we assume that the household budget is shared (perhaps not equally) between the household members. Sharing out the income earned by the household head - or any other household member - amongst the household members with a zero income (the situation of the majority of wives and children in Iraq) does not, however, relate to or reflect the returns to factors of production, since unemployed household members have nothing to do with the creation of income - except in so far as the wife contributes to the head's productivity through housework.

This study shows that household heads constitute 14.3 per cent of the population covered by the survey. To this we must add the 2.3 per cent who are the other productive members of households to obtain the total economically active proportion of individuals in our study. Thus, in 1971, about 83.4 per cent of the total sample population was economically inactive in the sense that they received no income. However, one cannot overlook the possibility that a certain percentage of this population constituted unpaid labour in the family's economic activity, in the rural areas and amongst the self-employed in urban areas.

Table (5.5) shows the distribution of income by individual in the country as a whole. It indicates a lesser disparity in income between the lower and top brackets in relation to the household distribution of income in two ways: first, the top income bracket had an adjusted income 8.3 times higher than that of the lower income bracket; second, there was a smaller proportion of individuals (0.3 per cent) in the lowest income bracket than there were households (0.7 per cent), but a larger proportion of individuals (9.8 per cent) in the highest income bracket than there were households (7.6 per cent).

The average adjusted per capita income for the entire population was ID. 81.7, and 60 per cent of the population had incomes lower than this. A slightly larger percentage of the population were receiving less than the average cash income, which was ID. 66.3.

Reading the income groups on the income scale according to the average annual per capita income in Figure 4, reveals that no such concentration of income units in the centre of the distribution existed as appeared in the distribution by households. With respect to adjusted income, only slightly over two-fifths of the individuals had per capital incomes ranging between ID.. 53 and ID. 72. In considering cash income, somewhat more than a third of the individuals were in average income range of ID.. 40 to ID.. 60.

Comparing the overall distributions by household (Table 5.3) and by individuals (Table 5.5), the results suggest that the distribution by individual is more equal. Receipts of the lowest 10 per cent of individuals - both in cash and adjusted income - are nearly double

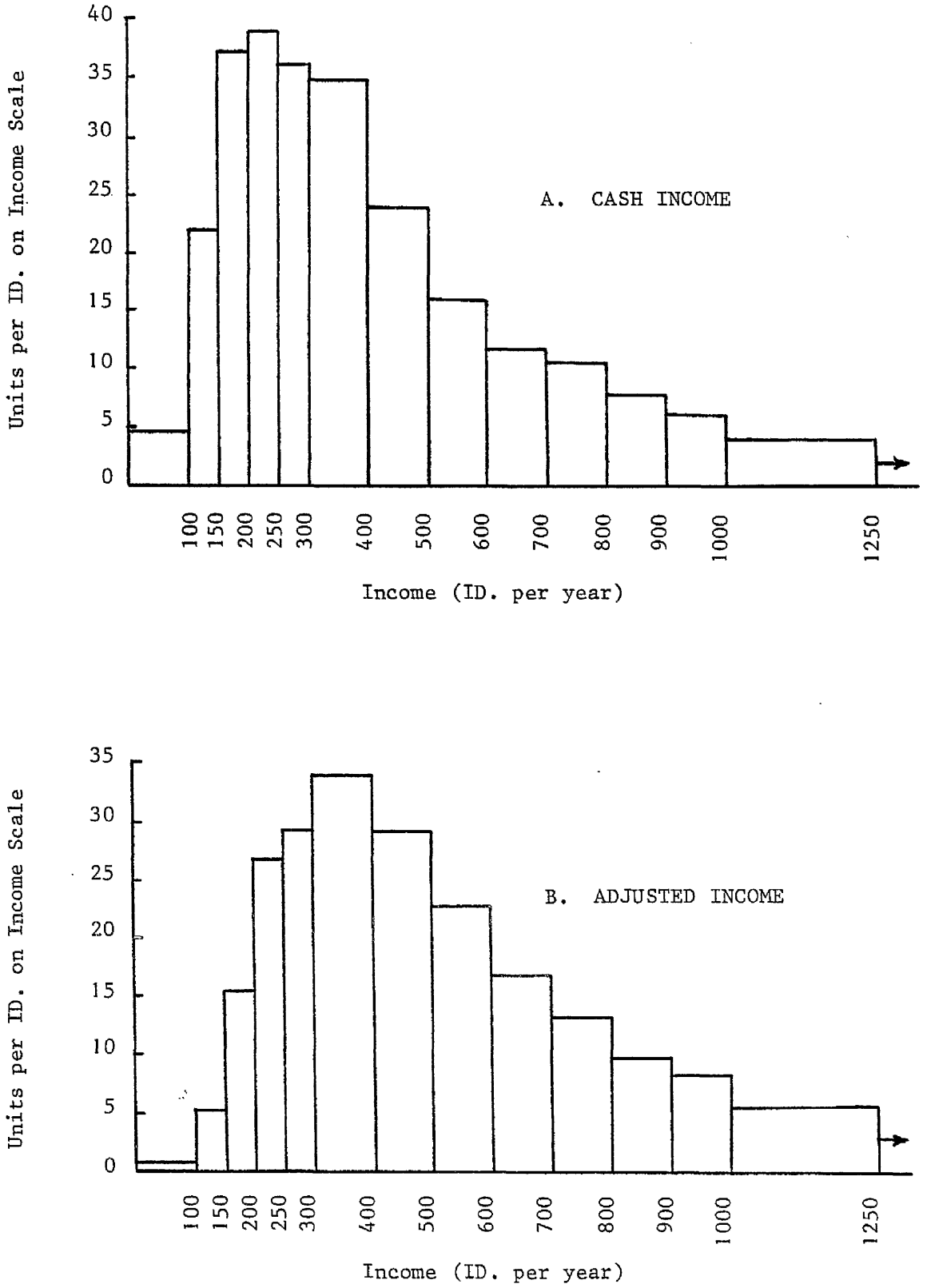


Fig.4: Frequency Distribution of Incomes by Individuals in Iraq, 1971
Source: Table (5.5)

TABLE (5.5)
Distribution of Income by Individuals in Iraq, 1971

INCOME GROUPS (per year ID.)	CASH INCOME				ADJUSTED INCOME			
	Number of Income Units (Individual)	Average Income (per year ID.)	Percentage of Total		Number of Income Units (Individual)	Average Income (per year ID.)	Percentage of Total	
			Income Units	Income			Income Units	Income
1 - 99	481	16.9	2.3	0.6	63	23.2	0.3	0.1
100 - 149	1105	25.0	5.3	2.0	261	34.4	1.3	0.5
150 - 199	1870	30.5	9.0	4.1	773	37.0	3.7	1.7
200 - 249	1962	35.7	9.5	5.1	1357	40.6	6.5	3.2
250 - 299	1814	40.2	8.7	5.3	1467	48.1	7.1	4.2
300 - 399	3480	47.7	16.8	12.1	3385	52.5	16.3	10.5
400 - 499	2393	60.4	11.5	10.5	2912	63.7	14.0	10.9
500 - 599	1592	70.4	7.7	8.1	2265	71.9	10.9	9.6
600 - 699	1182	77.5	5.7	6.7	1686	83.7	8.1	8.3
700 - 799	1048	90.0	5.0	6.9	1323	92.1	6.4	7.2
800 - 899	770	93.5	3.7	5.2	965	97.4	4.7	5.6
900 - 999	601	105.4	2.9	4.6	856	107.0	4.1	5.4
1000 - 1249	1036	121.8	5.0	9.2	1407	117.3	6.8	9.7
1250 & over	1424	189.6	6.9	19.6	2040	191.6	9.8	23.1
TOTAL	20759	66.3	100.0	100.0	20759	81.7	100.0	100.0

Source: See Appendix C

Table (5.6)

Percentage Income Shares of Deciles of Individuals, 1971

Deciles of Individuals	Percentage Income Shares			
	Cash Income		Adjusted Income	
	Non-cumulative	Cumulative	Non-cumulative	Cumulative
1st	3.7	3.7	4.6	4.6
2nd	4.8	8.5	5.8	10.4
3rd	5.7	14.2	6.5	16.9
4th	6.6	20.8	7.0	23.9
5th	7.2	28.0	7.9	31.8
6th	8.9	36.9	8.8	40.6
7th	10.1	47.0	10.4	51.0
8th	12.3	59.3	11.7	62.7
9th	15.4	74.7	13.9	76.6
10th	25.3	100.0	23.4	100.0

Source: See Appendix C.

those received by the lowest 10 per cent of households. On the other hand, the highest 10 per cent of individuals had an income lower than that of the highest 10 per cent of households by 15.5 per cent in adjusted income and 16.2 per cent in cash income.

The Gini concentration ratio showed less inequality in the income distribution of individuals. It was 0.3188 for cash income and 0.2645 for adjusted income. This greater equality in distribution is a consequence of the variation in household size with income level. As mentioned above, the average size of household in Iraq was 7.1 individuals, but the average size of household for the lowest three income groups was 4.2, 5.0 and 5.8 individuals, while the average size of household for the top of the three income groups was 9.0, 9.1 and 8.9 individuals.

E 3 Distribution of Income by Socio-Economic Groups

More detailed data on occupations and work status of the different income groups would help in explaining some of the inequality in income distribution, both nationally and between urban and rural areas.

This section begins by considering the ways in which income variations reflect different occupational structures, skill and training differences.

The distinction between agricultural and non-agricultural sectors will then be considered in relation to the major functional groups.

The discussion refers to adjusted income unless specific reference is made to cash income.

E 3 1 Occupational Structure

The occupational classification used in our study is similar to that suggested by the U.N. Statistical Office for manpower and income distribution studies.[1]

The differences in incomes between occupations is related to differences in the degree of skill required as well as the length of the training period. The resulting wage differentials between industries and regions will obviously encourage the work force to acquire skills with a higher remuneration.

The occupation of the head of the household is used in classifying households by occupational structure as is shown in Table (5.7) which sets out the absolute and relative earnings of the different occupations. The Table shows the cash and adjusted incomes for the country as a whole.

There are two occupations with very high average incomes: administrative and managerial workers, and professional, technical and related workers. These groups accounted for only 4.1 per cent of total households (household heads), while their total annual incomes were 7.8 per cent of the total. The figures do show considerable

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1 See reference to these classifications in N. Baster, op. cit., p. 11.

Table (5.7)

Occupational Structure and Income Shares in Iraq, 1971

(National Mean Income = 100)

Occupation	Cash Income				Adjusted Income			
	Percentage Shares of		Mean		Percentage Shares of		Mean	
	Household	Income	ID.	Index	Household	Income	ID.	Index
Professional, Technical Workers	3.6	6.9	886	188.1	3.6	6.3	997	171.9
Administrative & Managerial Workers	0.5	1.6	1579	335.2	0.5	1.5	1803	310.9
Clerical & Related Workers	7.7	8.7	535	113.6	7.7	8.1	614	105.9
Sales Workers	8.9	11.0	581	123.4	8.9	10.3	668	115.2
Services Workers	8.5	7.3	405	86.0	8.5	7.0	478	82.4
Farmers & Related Workers	39.1	32.2	388	82.4	39.1	36.2	536	92.4
Production Process & Related Workers	18.9	17.8	444	94.3	18.9	16.6	509	87.8
Others & Non-specified	12.8	14.5	529	112.3	12.8	14.0	633	109.1
Total	100.0	100.0	471	100.0	100.0	100.0	580	100.0

Source: See Appendix C.

variation in average income between the two occupations, which is of some interest since such variations do not exist between other occupations.

We have taken the national average income as a bench mark for reference to a simple index number. The results are of some significance, when comparing average adjusted income which was lower for production process workers than for farmers, while the inverse was true in terms of average cash income. This indicates the importance of the income in kind component in the adjusted income of the rural areas. Education and the availability of particular qualifications and skills are of some consequence in determining the range of differentials in earnings for different occupations.

The cross-tabulation of occupations by the size distribution of income is shown in Table (5.8), and reveals income disparities between and within different occupations. If the income brackets are thought of as constituting three broad income groups [a low income group (from the lowest income bracket up to I.D. 299) a middle income group (I.D. 300 to I.D. 699), and a top income group (from I.D. 700 to I.D. 1250 and over)] important conclusions can be drawn about the relation between the distribution of income and occupational earnings differentials. First, the concentration of the highly skilled occupations in the top income groups, is reflected by an annual average income of about I.D. 1,175. Nearly 93 per cent of the total administrative and managerial workers and two-thirds of the professional and technical workers fall within this category. In addition, one-third of the clerical workers and slightly less than one-fifth of production process workers, farmers and services workers are also to be

TABLE (5.8)
Distribution of Adjusted Income by Occupation in Iraq, 1971.
(First figure related to column percentage, second to row percentage)

Occupation \ Income groups (per year ID.)	1-99	100-149	150-199	200-249	250-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1249	1250 & over	Total
Professional, Technical and Related Workers	0 0	0 0	1.2 1.9	0.4 0.9	0. 0	1.1 5.1	2.5 9.7	3.0 8.4	3.6 7.5	7.0 10.7	5.7 6.0	12.4 11.3	7.4 10.3	13.4 28.2	3.6 100.0
Administrative and Managerial Workers	0 0	0 0	0 0	0 0	0 0	0 0	0.2 7.1	0 0	0 0	0.6 7.1	0 0	1.0 7.1	0 0	4.9 78.7	0.5 100.0
Clerical and Related Workers	6.6 0.6	6.0 1.8	4.5 3.3	7.8 8.5	7.4 8.5	8.3 18.6	7.7 14.2	7.3 9.7	4.3 4.2	7.4 5.3	10.8 5.3	9.7 4.2	10.4 6.8	8.9 8.9	7.7 100.0
Sales Workers	16.1 1.3	8.8 2.4	6.6 4.1	8.5 8.0	6.6 6.5	6.7 13.0	7.5 11.9	12.3 14.1	8.1 6.8	4.6 2.8	7.2 3.1	10.7 4.0	16.4 9.4	14.7 12.7	8.9 100.0
Services Workers	0 0	4.9 1.4	10.1 6.6	11.2 11.0	11.9 12.3	9.7 19.8	9.7 16.1	7.0 8.4	9.0 7.9	10.3 6.7	8.4 3.8	3.1 1.2	5.4 3.2	1.8 1.6	8.5 100.0
Farmers and Related Workers	16.1 0.3	37.0 2.2	42.5 6.0	39.8 8.5	46.6 10.5	40.6 17.9	42.9 15.4	40.9 10.6	43.5 8.3	35.6 5.0	30.4 2.9	30.0 2.5	32.2 4.2	27.9 5.5	39.1 100.0
Production Process, Trans. & Related Workers	19.0 0.7	10.1 1.3	17.5 5.1	20.2 8.9	18.8 8.8	25.0 22.8	20.6 15.3	18.7 10.0	16.3 6.4	23.5 6.9	24.7 4.9	14.5 2.5	12.4 3.3	7.6 3.1	18.9 100.0
Others and Non-Specified Workers	42.3 2.4	33.2 6.1	17.5 7.5	12.0 7.8	8.8 6.0	8.6 11.6	8.7 9.5	10.7 8.5	15.2 8.8	11.0 4.7	12.7 3.7	18.5 4.7	15.8 6.2	20.9 12.4	12.9 100.0
TOTAL	100.0 0.7	100.0 2.4	100.0 5.5	100.0 8.3	100.0 8.8	100.0 17.3	100.0 14.0	100.0 10.2	100.0 7.5	100.0 5.5	100.0 3.8	100.0 3.3	100.0 5.1	100.0 7.6	100.0 100.0

Source: See Appendix C.

found in the high income group. Second, more than half (52 per cent - 55 per cent) of the total farmers, production process workers and sales workers are found in the middle income group, which has an annual average income of nearly ID. 500. Third, the figures show that of the lowest income group nearly one quarter was production process workers, slightly more than that fraction were farmers, and one third was sales workers. The annual average income of this group was slightly over ID. 180.

This result suggests that the differentials in average incomes between and within these occupations are very wide. This was especially true between those occupations requiring higher education and skills on the one hand, and those requiring little skill on the other.

The top income occupations had an average income (6) six times higher than the lowest income group and (2.5) two and a half times the middle income group.

E 3 2 Work Status

For the country as a whole, three major functional groups (employers, self-employed and employees), and two sectors (agricultural and non-agricultural) were established.

Table (5.9) presents both cash and adjusted incomes for the above-mentioned groups. It shows that within the agricultural sector, despite the relative importance of agriculture in the economy, the number of wage and salary earners was very small and that the self-

Table (5.9)

Work Status and Income Share in Iraq, 1971

(National Mean Income = 100)

Work Status	Cash Income				Adjusted Income			
	Percentage Shares of		Mean		Percentage Shares of		Mean	
	Household Heads	Income	ID.	Index	Household Heads	Income	ID.	Index
Agricultural Sector								
Employers	0.3	0.6	805	172.0	0.3	0.6	1004	174.0
Self-employed	32.7	27.3	391	83.5	32.7	30.9	545	94.5
Employees	6.7	5.0	348	74.4	6.7	5.3	455	78.9
Non-Agricultural Sector								
Employers	1.3	2.8	1030	220.1	1.3	2.6	1175	203.6
Self-employed	15.5	18.4	557	119.0	15.5	17.2	640	110.9
Employees	30.6	31.4	481	102.8	30.6	29.3	554	96.0
Others & Non-Specified	12.9	14.5	528	112.8	12.9	14.1	632	109.5
Total	100.0	100.0	468	100.0	100.0	100.0	577	100.0

Source: See Appendix C.

employed were dominant. This point is of importance because the agricultural sector is still large, more than 50 per cent of the total labour force and the total rural population. Moreover, the other economic sectors are still unable to attract surplus labour and offer employment opportunities.

The self-employed are generally engaged in marginal activities and are still located in the low and middle income groups as is obvious from the Table. In the non-agricultural sector, the share of wages and salaries in total income could be considered a major factor in explaining the extent of inequality. Its higher share - and in turn the lower share of profits and other factor shares - is reflected in a lesser degree of inequality. The larger the profit, the greater the impression of a wider inequality. Unfortunately, however, the survey does not provide detailed information on this aspect of factor shares.

Wage and salary earners are dominant in the non-agricultural sector and account for nearly two-thirds of the total employed in this sector. Their share is about 60 per cent of total sectoral income.

Comparing the share of these functional groups in the agricultural and non-agricultural sectors we find firstly, that the wage and salary earners in both sectors accounted for 42.8 per cent and received about an equal share of cash income and less than that of the adjusted income; secondly, non-agricultural wage earners had an average income 18 per cent higher than those in the agricultural sector. The averages of the incomes for all the functional groups in the non-agricultural sector are higher than those in the agricultural sector. But the

variation ratios for average incomes between the functional groups within the agricultural sector are similar to the variation ratios in the non-agricultural sector.

Table (5.10) shows the cross-tabulation of work status and the size distribution of adjusted income. If we adopt criteria similar to those used in the previous section to distinguish three main income groups we can conclude first that in both agricultural and non-agricultural sectors the employers are concentrated in the upper income group. About two-thirds of total employers in the non-agricultural sector are in the highest average income group ranging between ID. 750 to ID. 1,990 a year, while a little less than two-thirds of employers in the agricultural sector had an average income lower than that in the non-agricultural sector (this was between ID. 700 to ID. 1,775 a year). About one-third and one-quarter of the self-employed and employees respectively in the non-agricultural sector fell into this upper part of the distribution. Only one-fifth of the self-employed and one-tenth of employees in the agricultural sector are included in the higher income group. Second, the middle income group was dominated by employees and the self-employed. In both sectors about one-half of the total engaged in these two functional groups are found in this income group as well as the remainder of the employers from the two sectors (40.2 per cent of agricultural employers and 35 per cent of non-agricultural employers).

Lastly, it is the agricultural wage earners who fall mainly in the lower income group, followed by one-quarter of the agricultural self-employed. One-quarter and one-fifth of the non-agricultural employees and self-employed respectively were also in the lower income

TABLE (5.10)
Distribution of Adjusted Income by Work Status in Iraq, 1971
(First figure related to column percentage, second to row percentage)

Income Groups (per year ID)	1-99	100-149	150-199	200-249	250-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1249	1250 & over	Total
AGRICULTURAL SECTOR															
Employers	0	0	0	0	0	0.3	0.3	0.5	0	0.9	0.9	0	0	1.7	0.4
	0	0	0	0	0	13.4	13.4	13.4	0	13.4	9.7	0	0	36.0	100.0
Self-employed	11.3	22.2	34.7	30.1	38.4	31.8	37.1	34.6	39.9	33.9	27.0	28.6	29.4	23.4	32.7
	0.2	1.6	5.9	7.7	10.3	16.8	15.9	10.7	9.1	5.7	3.1	2.9	4.5	5.5	100.0
Employees	4.7	14.8	7.8	9.4	8.0	9.6	6.0	7.0	4.5	2.1	3.4	2.5	4.8	3.8	6.7
	0.5	5.2	6.4	11.7	10.6	24.6	12.5	10.6	5.0	1.7	1.9	1.2	3.6	4.3	100.0
NON-AGRICULTURAL SECTOR															
Employers	0	0	0	0	0	0.4	1.7	1.3	0	2.5	0	1.0	3.4	6.3	1.3
	0	0	0	0	0	5.4	18.9	10.8	0	10.8	0	2.7	13.5	37.8	100.0
Self-employed	20.8	13.7	12.8	17.3	7.5	13.0	14.3	20.1	16.9	12.6	22.5	14.9	24.5	18.3	15.5
	1.0	2.1	4.6	9.3	4.3	14.5	13.0	13.1	8.2	4.5	5.5	3.2	8.0	9.0	100.0
Employees	20.8	16.0	27.2	31.1	37.3	36.3	31.9	25.7	23.5	37.2	33.4	35.6	22.1	25.5	30.6
	0.5	1.2	4.9	8.5	10.8	20.5	14.6	8.5	5.7	6.7	4.1	3.8	3.6	6.3	100.0
Others & Non-specified	42.4	33.2	17.5	12.0	8.8	8.6	8.7	10.8	15.2	11.0	12.7	17.5	1.58	21.0	12.8
	2.4	6.1	7.5	7.8	6.0	11.6	9.5	8.5	8.8	4.7	3.8	4.5	6.2	12.4	100.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	0.7	2.4	5.5	8.3	8.8	17.3	14.0	10.1	7.5	5.5	3.8	3.3	5.1	7.6	100.0

Source: See Appendix C.

group.

F Distribution of Income by Urban and Rural Areas of Iraq, 1971

F 1 Distribution of Income by Urban and Rural Areas

The definition of "rural areas" commonly used in Iraq is based on the boundaries of municipalities with no supply of electricity or water services. This definition differs from that used in many other countries where population size is used as the determining factor.

The distinction between rural and urban areas can be seen to coincide with another distinction: that between modern and non-modern sectors of the economy. This latter concerns the methods and means of production in the various areas; the technology in the rural areas remains primitive.

Concentration of most new types of activity (especially the new growing industries) in the cities, which are chiefly to be found in urban areas, has contributed substantially to the widening gap between urban and rural areas.

In the rural areas more than 80 per cent of the population is engaged in agricultural activities and this is, therefore, the major source of income in this sector. In the urban areas there is a greater variety and wider dispersion of economic activities.

Before engaging in a straighforward country-wide comparison of the size distribution of income between urban and rural areas, however, it is necessary to make several qualifications.

First, in rural areas most household income represents not just an individual's earnings (the head of the household) but the return to the labour of all family members. The return, however, is not simply a return to labour, but also to the land and capital used in the process of production (the family holding, livestock and agricultural equipment, etc.). This element is what appears in the national accounts under the heading "mixed income" representing as it does the return to most if not all factors of production. Estimating factor shares in this return according to the productive contribution is not an easy task.

In the urban areas, where heads of households are the main family income earners, the income of wives and children must also be added (most commonly the case in low and middle income households). Household income in urban areas is also "mixed income" since this is realized in some cases from capital investment as well as labour provided.

Second, the fluctuating pattern of agricultural production and/or income subjects rural households to significant annual fluctuations. Figure 5 shows the 1964-1974 index numbers of agricultural production, net cultivated area and average yield per Meshara. Urban household income, on the other hand, is subject to no such fluctuations.

Third, most rural households, both those with their own small plots and those exclusively of employees, are able to provide part of

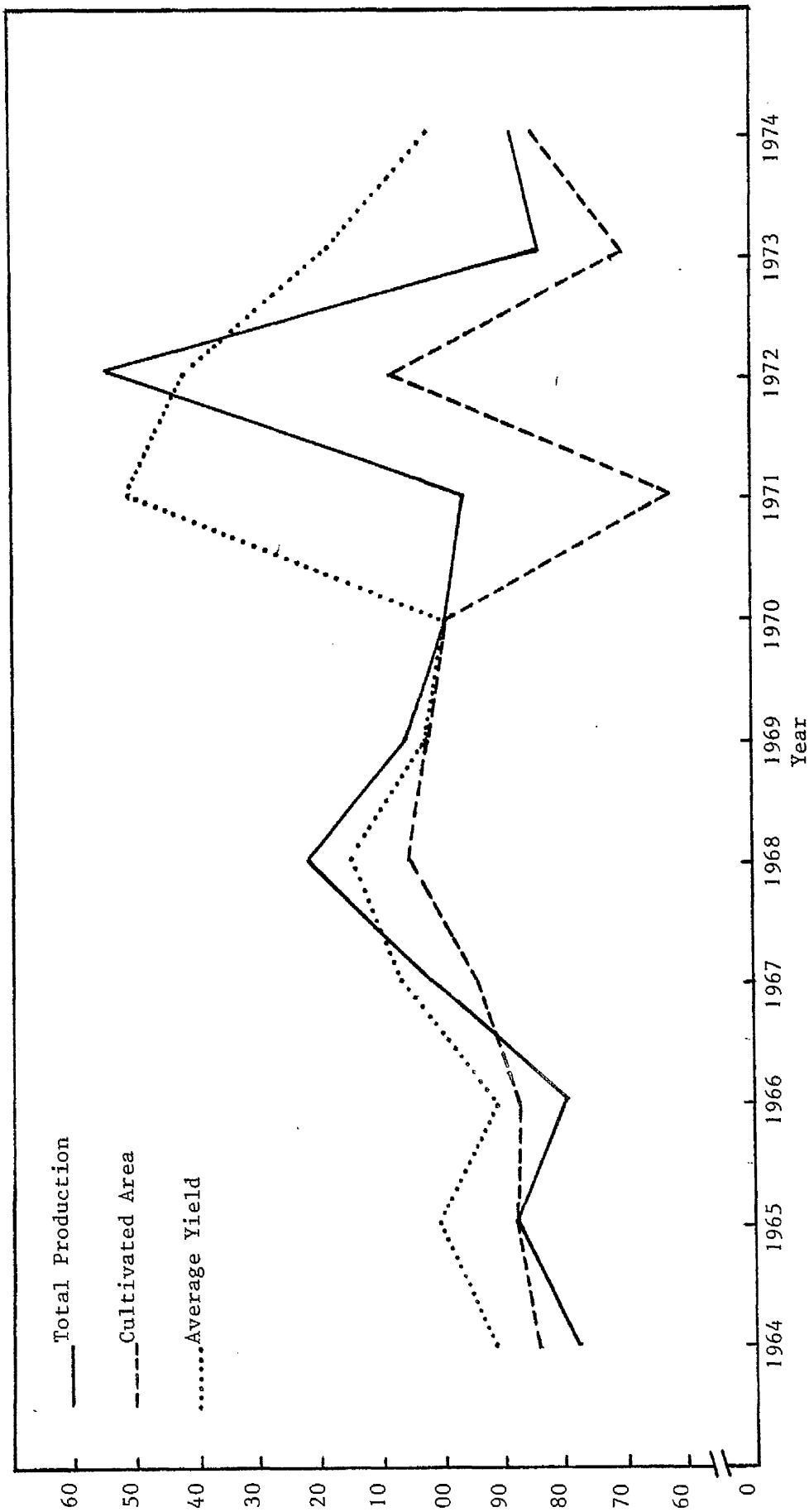

Fig.5: Agricultural Production, Net Cultivated Area and Average Yield per Meshara, 1964-1974 (1970 = 100)
Source: Central Statistical Organization, Annual Abstracts of Statistics, 1975, Table 50/3, p.115.

their food needs from their own production. This is uncommon in urban areas and in the few cases where it does occur, the amount of produce is small.

Fourth, there exists a large apparent difference in the cost of living between urban and rural areas. The higher cost of living in the urban areas is partly the result of the cost of housing, since this absorbs a significant proportion of urban household income. In rural areas, rent was not imputed in household expenditure. The cost of food is also higher in the urban areas. In the rural areas, however, the value of subsistence output (consumption in kind) was estimated at wholesale prices which are not similar to the retail prices in nearby urban areas. Differences arise from the trade and marketing margins which are higher in the urban areas. This approach may have resulted in an estimation of rural household expenditure below its real level.

The difference in the standard of living between these two areas was reflected, moreover, in differences in the style of living. The possibilities for a varied social life and the availability of recreational facilities are greater for the urban population.

Reference must be made also to the area differences in, and unequal distribution of, educational provision and health services. In including health and educational distribution as well as electrical and water service distribution, this analysis takes us beyond the monetary limits set by traditional income distribution studies.

The first point to note in the urban-rural distribution of income is the obvious differences in the average income - both in cash and

adjusted terms. The average cash income of an urban household is 1.5 (one and one-half) times that of a rural household, or 1.2 times higher for adjusted income. This shows that the average income per household for the urban areas as a whole is nearly 20 per cent higher than for rural areas.

With respect to the size of households in the urban areas, the average size of household was found to be 7.3 individuals, while in the rural areas it was 6.8 individuals.

Despite the facts that 1) the average income of the top 50 per cent of urban households is 3.1 times that of the bottom 50 per cent while the rural ratio is only 2.7 : 1, and 2) the bottom 50 per cent of urban households get 24.6 per cent of urban income, whereas the bottom 50 per cent of rural households get 26.7 per cent, the former are on the average better off than the latter. The difference in average income between urban and rural areas is sufficient to off-set any advantage that the lower 50 per cent in rural areas might have gained from a more equitable distribution. It is clear, therefore, that a considerable inequality of income distribution prevails.

Now, if we move to compare the inequality of income distribution among the entire urban-rural areas, we need to use beside the most commonly used measure of inequality, the Gini concentration ratio, a ratio of incomes between defined groups, such as the upper and lower 10 per cent (deciles), 20 per cent (quantiles) and those in the middle (50 per cent), etc. This is shown in Table (5.11) for the urban and rural areas for adjusted income.

Table (5.11)

Percentage Income Shares of Deciles of Urban and Rural Households, 1971

Deciles of Households	Percentage of Adjusted Income Shares			
	Urban Income		Rural Income	
	Non-Cumulative	Cumulative	Non-Cumulative	Cumulative
1st	2.8	2.8	3.0	3.0
2nd	4.0	6.8	4.3	7.3
3rd	5.3	12.1	5.3	12.6
4th	5.6	17.7	6.8	19.4
5th	6.9	24.6	7.3	26.7
6th	8.5	33.1	8.8	35.5
7th	9.7	42.8	10.2	45.7
8th	12.6	55.4	12.1	57.8
9th	16.5	71.9	15.8	73.6
10th	28.1	100.0	26.4	100.0

Source: See Appendix C.

The concentration ratios for the urban areas was 0.3683 and for the rural areas was 0.3417; this means that the incomes are distributed more equally in the rural areas.

However, out of the total income in the rural areas, only 7.3 per cent goes to the lowest 20 per cent of households, while the top 20 per cent receive 42.2 per cent.

In the urban areas, the top 20 per cent receive a larger share of urban income (44.6 per cent) than its counterpart in rural areas receives of rural income. The lowest 20 per cent receive a smaller share (6.8 per cent) that their counterpart in rural areas.

F 2 Distribution of Income by Urban and Rural Socio-Economic Groups

F 2 1 Occupational Structure

There are two main urban-rural differences in occupational structure: average income is higher in urban areas and there is a wider income differential between occupational groups (Table 5.12). Nevertheless, while urban average income is 20 per cent higher than its rural counterpart, a much larger proportion of workers falls below the average in the urban areas.

In urban areas, one-half of the workers in the services and production sectors and farmers earn incomes below the urban average. Only 22 per cent of workers in the rural areas earn below the rural average and these are mainly in non-farming occupations.

TABLE (5.12)
Occupational Structure in Urban and Rural Areas of Iraq, 1971.

(National Mean Income = 100)

OCCUPATION	URBAN AREAS								RURAL AREAS							
	CASH INCOME				ADJUSTED INCOME				CASH INCOME				ADJUSTED INCOME			
	Percentage Shares		Mean		Percentage Shares		Mean		Percentage Shares		Mean		Percentage Shares		Mean	
	Household Heads	Income	ID	Index Number	Household Heads	Income	ID	Index Number	Household Heads	Income	ID	Index Number	Household Heads	Income	ID	Index Number
Professional & Teachnical Workers	6.4	10.5	906	164.1	6.4	10.1	1018	159.6	0.3	0.4	540	145.0	0.3	0.4	628	123.4
Administrative & Managerial Workers	0.9	2.5	1579	286.1	0.9	2.5	1803	282.6	0	0	0	0	0	0	0	0
Clerical & Related workers	11.7	12.2	577	104.5	11.7	12.0	660	103.4	2.9	2.6	332	89.2	2.9	2.2	395	77.6
Sales Workers	14.4	16.2	620	112.3	14.4	16.1	712	111.6	2.3	1.8	287	77.2	2.3	1.7	375	73.7
Services Workers	14.1	10.5	410	74.3	14.1	10.7	481	75.4	1.8	1.7	353	94.9	1.8	1.6	451	88.6
Farmers & Related Workers	6.6	5.6	465	84.2	6.6	6.0	577	90.4	77.6	79.3	380	102.2	77.6	81.1	532	104.5
Production Process Trans. & Related Workers	29.9	25.0	462	83.7	29.9	24.8	528	82.8	5.9	5.3	334	89.8	5.9	4.5	392	77.0
Others & Non-specified	16.0	17.6	609	110.3	16.0	17.8	710	111.3	9.2	8.9	360	96.8	9.2	8.5	470	92.3
TOTAL	100.0	100.0	552	100.0	100.0	100.0	638	100.0	100.0	100.0	372	100.0	100.0	100.0	509	100.0

Source: See Appendix C.

There is also a significant difference between cash and adjusted income. In the rural areas adjusted income is 37 per cent higher than cash income. The difference is only 12 per cent in the urban areas.

The result of the occupational structure raises a striking point, that is the non-existence of administrative and managerial workers and the low number of technicians in the rural areas. The technical workers who are working in the rural areas, though earning a higher than average income for these areas, earn more than a third less than their urban equivalents. It is clear, therefore, that there is no incentive for the much needed technicians to transfer from the urban to the rural areas.

The size distribution of income by occupations in the urban and rural areas as shown in Table (5.13) and Table (5.14) reveals in the aggregate for all occupations first, that a relatively higher number of workers are in the top income group in the urban area; second, that in both areas nearly half of the total workers are in the middle income group.

In terms of specific occupations, the same distribution pattern is dominant in both areas: two-thirds of professional workers are in the top income group and the remainder in the middle income group. In urban areas a higher percentage of farmers and services workers are to be found in the lower income group (37 per cent and 31 per cent respectively), while the majority of sales workers and clerical workers in the rural areas are to be found in the lower income group (54 per cent and 43 per cent respectively). More than half of all farmers

TABLE (5.13)
Distribution of Adjusted Income by Occupation, Urban Areas of Iraq, 1971
(First figure related to column percentage, second to row percentage)

Occupation \ Income Groups (per year ID)	1-99	100-149	150-199	200-249	250-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1249	1250 & Over	Total
Professional, Technical	0	0	2.6	0.8	0	1.5	4.7	5.3	7.1	11.0	6.8	20.7	11.6	18.5	6.4
and Related Workers	0	0	2.0	1.0	0	3.9	9.8	8.8	7.8	9.8	4.9	11.8	10.8	29.4	100.0
Administrative and	0	0	0	0	0	0	0.5	0	0	1.1	0	1.7	0	6.8	0.9
Managerial Workers	0	0	0	0	0	0	7.1	0	0	7.1	0	7.1	0	78.7	100.0
Clerical and	0	0	7.9	11.9	12.3	12.7	11.8	11.2	7.1	13.2	16.4	13.8	13.7	12.3	11.7
Related Workers	0	0	3.2	7.5	8.0	18.7	13.4	10.2	4.3	6.4	6.4	4.3	7.0	10.7	100.0
Sales Workers	20.0	6.9	10.5	11.9	13.1	10.9	14.7	20.0	13.3	6.6	11.0	15.5	24.2	20.4	14.4
	0.9	0.9	3.5	6.1	6.9	13.0	13.4	14.7	6.5	2.6	3.5	3.9	10.0	14.3	100.0
Services Workers	0	6.9	19.7	21.2	23.0	17.5	17.1	11.8	14.2	15.4	11.0	5.2	8.4	2.5	14.2
	0	0.9	6.6	11.0	12.3	21.1	15.9	8.8	7.0	6.2	3.5	1.3	3.5	1.8	100.0
Farmers and	20.0	24.1	9.2	9.3	9.8	6.9	3.8	8.8	7.1	1.1	4.1	0	5.3	4.3	6.6
Related Workers	1.9	6.7	6.7	10.5	11.4	18.1	7.6	14.3	7.6	1.0	2.9	0	4.8	6.7	100.0
Production Process,	40.0	20.7	30.3	31.4	31.1	39.6	34.1	31.2	29.2	35.2	35.6	24.1	17.9	10.5	30.0
Trans. & Related Workers	0.8	1.2	4.8	7.7	7.9	22.7	15.0	11.0	6.9	6.7	5.4	2.9	3.5	3.5	100.0
Others &	20.0	41.4	19.7	13.6	10.7	10.9	13.3	11.8	22.1	16.5	15.1	19.0	18.9	24.7	16.0
Non-specified	0.8	4.7	5.9	6.3	5.1	11.7	10.9	7.8	9.8	5.9	4.3	4.3	7.0	15.6	100.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	0.6	1.8	4.7	7.4	7.6	17.2	13.2	10.6	7.0	5.7	4.6	3.6	5.9	10.1	100.0

Source: See Appendix C.

TABLE (5.14)
Distribution of Adjusted Income by Occupation, Rural Areas of Iraq, 1971
(First figure related to column percentage, second to row percentage)

Occupation \ Income Groups (per year ID)	1-99	100-149	150-199	200-249	250-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1249	1250 & Over	Total
Professional, Technical & Related Workers	0 0	0 0	0 0	0 0	0 0	0.6 33.3	0 0	0 0	0 0	1.9 33.3	3.7 33.3	0 0	0 0	0 0	0.3 100.0
Administrative and Managerial Workers	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Clerical and Related Workers	12.5 3.6	10.3 10.7	1.6 3.6	4.3 14.3	3.0 10.7	3.0 17.9	3.4 17.9	2.2 7.1	1.3 3.6	0 0	0 0	3.6 3.6	5.1 7.1	0 0	2.9 100.0
Sales Workers	12.5 4.5	10.3 13.6	3.2 9.1	5.4 22.7	1.0 4.5	1.8 13.6	0 0	2.2 9.1	2.6 9.1	1.9 4.5	0 0	3.6 4.5	2.6 4.5	0 0	2.3 100.0
Services Workers	0 0	3.4 5.9	1.6 5.9	2.2 11.8	2.0 11.8	0.6 5.9	2.1 17.6	1.1 5.9	3.9 17.6	3.8 11.8	3.7 5.9	0 0	0 0	0 0	1.8 100.0
Farmers and Related Workers	12.5 0.1	44.8 1.7	71.4 6.0	67.4 8.3	78.8 10.4	79.9 18.0	83.6 16.3	82.8 10.3	81.8 8.4	78.8 5.5	81.5 2.9	75.0 2.8	79.5 4.1	88.6 5.2	77.6 100.0
Production Process, Tran. & Related Workers	0 0	3.4 1.8	6.3 7.0	9.8 15.8	8.1 14.0	8.3 24.6	6.8 17.5	2.2 3.5	2.6 3.5	9.6 8.8	3.7 1.8	0 0	2.6 11.8	0 0	5.9 100.0
Others and non-specified	62.5 5.6	27.6 9.0	15.9 11.2	10.9 11.2	7.1 7.9	5.9 11.2	4.1 6.7	9.7 10.1	7.8 6.7	3.8 2.2	7.4 2.2	17.9 5.6	10.3 4.5	11.4 5.6	9.2 100.0
TOTAL	100.0 0.8	100.0 3.0	100.0 6.5	100.0 9.5	100.0 10.2	100.0 17.5	100.0 15.1	100.0 9.6	100.0 8.0	100.0 5.4	100.0 2.8	100.0 2.9	100.0 4.0	100.0 4.6	100.0 100.0

Source: See Appendix C.

and slightly less than half of production process, service and clerical workers in rural areas are in the middle income group. Urban areas differ only in so far as sales workers must be added to those in occupations in the middle income group.

F 2 2 Days Worked by Occupations

Lastly, in considering urban and rural differences in terms of working days and hours, no data were available on a country or governorate level. The data shown in Table (5.15) reveal the average number of working days (per month) and the number of hours (per day) for each occupation in the urban and rural areas.[1]

The comparison suggests 1) that the aggregate urban areas' number of both working days (25.6) and hours (7.8) are higher than those in the rural areas (22.9 days per month and 6.1 hours per day); 2) that farmers in both areas have the smallest number of working days per month (it also transpires that farmers in urban areas work more hours per day than those in rural areas (8 : 6)); 3) that production process workers, despite the fact that they work a similar number of hours in both areas, have less working days per month in the enterprises located in rural areas (23 days) than those in urban areas.

From this one might expect that, with the greater part of the labour force engaged in agriculture, there would be lower productivity

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1 The data are from the household budget survey, the Second Stage (December 1971). The survey was not explicit, the data relate to an average working day and hours, not particularly for December.

Table (5.15)

Distribution of Workers by Occupation and the Average Working Days in Urban and Rural Areas of Iraq, 1971

Occupation	Urban Area		Rural Area	
	Average No. of Working		Average No. of Working	
	Days	Hours	Days	Hours
Professional & Technical Workers	25	5	23	6
Administrative & Managerial Workers	27	9	25	6
Clerical & Related Workers	25	7	26	8
Sales Workers	28	9	26	7
Services Workers	26	8	25	7
Farmers	23	8	23	6
Production Process Workers	25	8	23	8
All Occupations	25.6	7.8	23.0	6.1

Source: See Appendix C.

and income than otherwise. This situation also explains, to some extent, the lower level of income in rural areas and the effect of this on overall inequality.

F 2 3 Work Status

The distribution of workers in urban and rural areas, as shown in Table (5.16), distinguishes between the agricultural and non-agricultural sectors. The difference between functional groups in both absolute income and their relative shares are of considerable interest.

Nearly 92 per cent of urban income is created in the non-agricultural sector, while 89 per cent of rural income comes from agricultural activities. Differences in urban-rural areas become most obvious when comparing the share of wages and salaries in the total income of both areas: this was 56.7 per cent in urban areas, but only 18.6 per cent in the rural areas. This difference can be explained directly by the much greater size of non-agricultural activities in urban areas, where wage earners constitute just over three-fifths of the employed population. In the rural areas, where agricultural activities predominate, wage earners represent only a small part of total income earners (though they account for more than three quarters of those employed in the non-agricultural sector in these areas).

It is the income of the self-employed that provides the dominant part of total income in rural areas. Self-employed income is 80.2 per cent of total income though only 77.2 per cent of the total employed

TABLE (5.16)
Work Status in the Urban and Rural Areas of Iraq, 1971

(National Mean Income = 100)

WORK STATUS	URBAN AREAS								RURAL AREAS							
	CASH INCOME				ADJUSTED INCOME				CASH INCOME				ADJUSTED INCOME			
	Percentage Share		Mean		Percentage Share		Mean		Percentage Share		Mean		Percentage Share		Mean	
	Household Heads	Income	ID	Index Number	Household Heads	Income	ID	Index Number	Household Heads	Income	ID	Index Number	Household Heads	Income	ID	Index Number
AGRICULTURE																
Employers	0.2	0.3	848	154.7	0.2	0.3	980	154.8	0.5	1.2	821	220.7	0.5	1.1	1050	206.3
Self-employed	4.3	3.5	443	80.8	4.3	3.9	576	91.0	66.5	68.9	386	103.8	66.5	70.7	542	106.5
Employees	3.3	2.5	423	77.2	3.3	2.6	494	78.0	10.8	9.3	322	86.6	10.8	9.4	443	87.0
NON-AGRICULTURE																
Employers	2.3	4.3	1030	188.0	2.3	4.3	1175	185.6	0	0	0	0	0	0	0	0
Self-employed	25.6	27.3	585	106.8	25.6	27.0	670	105.8	3.6	3.0	311	83.6	3.6	2.7	381	74.9
Employees	48.4	44.4	502	91.6	48.4	44.1	576	91.0	9.4	8.7	343	92.2	9.4	7.6	413	81.1
Others & Non-specified	15.9	17.7	608	110.9	15.9	17.8	709	112.0	9.2	8.9	360	96.8	9.2	8.5	470	92.3
TOTAL	100.0	100.0	548	100.0	100.0	100.0	1633	100.0	100.0	100.0	372	100.0	100.0	100.0	509	100.0

Source: See Appendix C.

population is self-employed. In urban areas the self-employed constitute just over one third of the employed population and had a similar proportion of income.

As has been mentioned previously, it is not an easy task to separate out the share of profit in the mixed income of the self-employed. It would not be accurate, therefore, to represent what remains of total income after deducting wages and self-employed income as the share of profit in total income. This is true of both urban and rural areas as well as nationally.

The relative share of wages and salaries in the agricultural sector comes to approximately 11.5 per cent of total rural agricultural income, while wage and salary earners are 13.8 per cent of all workers in the rural agricultural sector. In the urban agricultural sector wages make up 38 per cent of income, and workers constitute 42.4 per cent of the total employed.

In the non-agricultural sector, urban wages and salaries accounted for 58.4 per cent of total adjusted incomes, and, here, wage earners represented 63.5 per cent of the employed population. There was a clear difference in rural areas where the wage share rose to 73.8 per cent and workers as a proportion of the employed in this sector represented slightly less than this percentage.

The self-employed represented approximately one third of the employed population in the non-agricultural sector of the urban areas and earned a similar proportion of total income. In the rural non-

agricultural sector they enjoyed slightly more than a quarter of total employment and a similar share of total income.

From the preceding observations one may draw some conclusions about average income differentials. Apart from the average income of each of the functional groups, Table (5.16) contains an index number based on the overall national average income. As might be expected, employers in both agricultural and non-agricultural sectors of the urban areas enjoyed the highest average income: nearly two-thirds of these are in the highest income group as shown in Tables (5.17 and 5.18). In the rural agricultural sector the employers' average income is slightly higher than their urban counterparts'.

With respect to the wage earners and self-employed the situation may be summarized as follows:

1 . The average income of wage earners and the self-employed is higher in the urban areas for both agricultural and non-agricultural sectors. Income differences between the two areas are highest in the non-agricultural sector (43 per cent and 28 per cent higher in urban areas for the self-employed and workers respectively).

2 In the urban areas nearly half of the wage earners and self-employed of both agricultural and non-agricultural sectors are in the middle income group. A third of the non-agricultural self-employed and a fifth of the agricultural self-employed are in the top income group.

3 The rural areas have a higher proportion of non-agricultural

TABLE (5.17)
Distribution of Adjusted Income by Work Status, Urban Areas of Iraq, 1971
(First figure related to column percentage, second to row percentage)

Income Groups (per year ID)	1-99	100-149	150-199	200-249	250-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1249	1250 & over	Total
AGRICULTURE SECTOR															
Employers	0	0	0	0	0	0.4	0	0	0	0	1.4	0	0	0.6	0.2
	0	0	0	0	0	33.3	0	0	0	0	33.3	0	0	33.3	100.0
Self-employed	10.0	10.3	5.3	5.9	4.9	3.6	2.8	6.5	6.2	1.1	2.7	0	5.3	3.7	4.3
	1.4	4.3	5.8	10.1	8.7	14.5	8.7	15.9	10.1	1.4	2.9	0	7.2	8.7	100.0
Employees	10.0	13.8	3.9	1.7	5.7	4.4	1.9	4.1	2.7	2.2	1.4	1.7	3.2	1.9	3.3
	1.9	7.5	5.7	3.8	13.2	22.6	7.5	13.2	5.7	3.8	1.9	1.9	5.7	5.7	100.0
NON-AGRICULTURE SECTOR															
Employers	0	0	0	0	0	0.7	3.3	2.4	0	4.4	0	1.7	5.3	8.6	2.3
	0	0	0	0	0	5.4	18.9	10.8	0	10.8	0	2.7	13.5	37.8	100.0
Self-employed	30.0	13.8	23.7	28.8	13.9	20.7	25.6	33.7	28.3	20.9	34.2	22.4	36.8	25.3	25.5
	0.7	1.0	4.4	8.3	4.2	13.9	13.2	13.9	7.8	4.6	6.1	3.2	8.6	10.0	100.0
Employees	30.0	20.7	47.4	50.0	64.8	59.3	53.1	41.4	40.7	54.9	45.2	56.9	30.5	35.2	48.4
	0.4	0.8	4.6	7.6	10.2	21.0	14.4	9.0	5.9	6.1	4.3	4.3	3.7	7.3	100.0
Others & non-specified	20.0	41.4	19.7	13.6	10.7	10.9	13.3	11.8	22.1	16.5	15.1	17.2	18.9	24.7	15.9
	0.8	4.7	5.9	6.3	5.1	11.8	11.0	7.8	9.8	5.9	4.3	3.9	7.1	15.7	100.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	0.6	1.8	4.7	7.4	7.6	17.2	13.2	10.5	7.1	5.7	4.6	3.6	5.9	10.1	100.0

Source: See Appendix C.

TABLE (5.18)
Distribution of Adjusted Income by Work Status, Rural Areas of Iraq, 1971
(First figure related to column percentage, second to row percentage)

Work Status \ Income Groups (Per year ID)	1-99	100-149	150-199	200-249	250-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1249	1250 & Over	Total
AGRICULTURE SECTOR															
Employers	0	0	0	0	0	0	0.7	1.1	0	1.9	0	0	0	4.5	0.5
	0	0	0	0	0	0	20.0	20.0	0	20.0	0	0	0	40.0	100.0
Self-employed	12.5	31.0	60.3	52.2	67.7	64.5	72.6	71.0	75.3	75.0	74.1	71.4	71.8	75.0	66.5
	0.2	1.4	5.9	7.5	10.4	17.0	16.5	10.3	9.0	6.1	3.1	3.1	4.4	5.1	100.0
Employees	0	13.8	11.1	16.3	10.1	16.0	10.3	10.8	6.5	1.9	7.4	3.6	7.7	9.1	10.8
	0	3.8	6.7	14.4	9.6	26.0	14.4	9.6	4.8	1.0	1.9	1.0	2.9	3.8	100.0
NON-AGRICULTURE SECTOR															
Employers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Self-employed	12.5	13.8	3.2	6.5	2.0	4.1	2.7	2.2	5.2	1.9	0	3.6	2.6	0	3.6
	2.9	11.4	5.7	17.1	5.7	20.0	11.4	5.7	11.4	2.9	0	2.9	2.9	0	100.0
Employees	12.5	13.8	9.5	14.1	13.1	9.5	9.6	5.4	5.2	15.4	11.1	3.6	7.7	0	9.4
	1.1	4.4	6.6	14.3	14.3	17.6	15.4	5.5	4.4	8.8	3.3	1.1	3.3	0	100.0
Others & non-specified	62.5	27.6	15.9	10.9	7.1	5.9	4.1	9.7	7.8	3.8	7.4	17.9	10.3	11.4	9.2
	5.6	9.0	11.2	11.2	7.9	11.2	6.7	10.1	6.7	2.2	2.2	5.6	4.5	5.6	100.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	0.8	3.0	6.5	9.5	10.2	17.5	15.1	9.6	8.0	5.4	2.8	2.9	4.0	4.6	100.0

Source: See Appendix C.

self-employed and wage earners in the lower income group than urban areas (43 per cent and 41 per cent respectively). Only one quarter and one third of agricultural self-employed and wage earners respectively are found in the lower income group.

One can conclude from the foregoing that the non-modern agricultural sector contains a substantial proportion of those at the bottom and in the middle of the income scale. The difference in average income between urban and rural areas is considerable; average urban income is a quarter more than that of the rural areas.

Agricultural productivity remains low, the agrarian reform measures having failed to provide the necessary incentive for farmers to improve productivity. The size of this sector will thus play a large part in determining the degree of income inequality in the country as a whole.

With a high rate of population growth and a limited capacity for labour absorption in the urban areas due to capital intensive technology likely to continue, many of those who are absorbed in urban areas will be engaged in marginal non-productive activities.

CHAPTER VI

Regional Distribution of Income in Iraq, 1971

This chapter is concerned with the 1971 regional size distribution of income. This will be dealt with by studying the degree of income inequality in each of the three regions of Iraq.

Different measures of inequality (particularly the Gini ratio of concentration and the standard deviation of logarithms of income) are used to clarify each region's position as well as that of the individual governorates.

Inter-regional differences in the urban-rural distribution are studied in addition to intra-regional urban-rural differences. The size distribution of income of the regional socio-economic groups by occupation and work status is also considered.

Appendix C shows detailed data on the size distribution of income for each region and governorate.

This chapter is, therefore, divided into four sections:

A Regional Distribution of Income

B Regional Distribution of Income by Urban-Rural Areas

C Regional Socio-economic Groups

D Distribution of Income by Governorates

A Regional Distribution of Income

For a proper interpretation of the significance of the differences in the size distribution of income for the three regions (North, Central and South) we need to note first the differences in average household income and in average per capita income. It is important to remember that there is no marked difference in the size of households between the three regions. The average size of households was 6.6, 7.4 and 7.0 persons in the Northern, Central and Southern regions respectively.

A comparison of the Central region's average household, adjusted income of ID.. 689.1 and the annual per capita income for the country as a whole, ID.. 93.3, reveals that there are wide differences between this region and the other two regions. The average per household income of the Central region is 32 per cent higher than that of the Northern region and 28 per cent higher than that of the Southern region. Because of the slight difference in the size of households mentioned above, the per capita income of the Northern and Southern regions is lower by 23.7 and 24.2 per cent respectively than that of the Central region. The disparity between the average household income of the top 10 per cent of households and the poorest 10 per cent is striking in all regions. In the Central region the average income of the top 10 per cent of households is 9.3 times higher than the average income of the lowest 10 per cent of households. The figures were 8.6 and 8.7 times in the Northern and Southern regions respectively.

We have arranged the households and individuals into deciles from the lowest to highest according to the income shares received as shown in Tables (6.1, 6.2 and 6.3) for each of the three regions. The

Table (6.1)

Northern Region: Distribution of Adjusted Income by Households, and Individuals, 1971

Deciles of Households or Individuals	Percentage Income Shares			
	Individuals Adjusted Income		Households Adjusted Income	
	Non-Cumulative	Cumulative	Non-Cumulative	Cumulative
1st	5.0	5.0	3.1	3.1
2nd	5.7	10.7	4.5	7.6
3rd	6.8	17.5	5.3	12.9
4th	7.7	25.2	6.3	19.2
5th	8.5	33.7	7.4	26.6
6th	9.3	43.0	8.8	35.4
7th	10.3	53.3	10.3	45.7
8th	12.3	65.6	12.3	58.0
9th	14.2	79.8	15.4	73.4
10th	20.2	100.0	26.6	100.0

Source: See Appendix C

Table (6.2)

Central Region: Distribution of Adjusted Income by Households and Individuals, 1971

Deciles of Households or Individuals	Percentage Income Shares			
	Individuals Adjusted Income		Households Adjusted Income	
	Non-Cumulative	Cumulative	Non-Cumulative	Cumulative
1st	4.4	4.4	2.8	2.8
2nd	5.5	9.9	4.3	7.1
3rd	6.0	15.9	5.2	12.3
4th	6.9	22.8	6.1	18.4
5th	8.1	30.9	7.1	25.5
6th	9.3	40.2	8.4	33.9
7th	10.1	50.3	10.1	44.0
8th	12.0	62.3	12.5	56.5
9th	16.4	78.7	17.6	74.1
10th	21.3	100.0	25.9	100.0

Source: See Appendix C

Table (6.3)

Southern Region: Distribution of Adjusted Income by Households and Individuals, 1971

Deciles of Households or Individuals	Percentage Income Shares			
	Individuals Adjusted Income		Households Adjusted Income	
	Non-Cumulative	Cumulative	Non-Cumulative	Cumulative
1st	5.6	5.6	3.1	3.1
2nd	6.6	12.2	4.4	7.5
3rd	7.1	19.3	5.5	13.0
4th	7.3	26.6	6.9	19.9
5th	8.7	35.3	7.0	26.9
6th	9.0	44.3	9.2	36.1
7th	9.4	53.7	9.7	45.8
8th	11.1	64.8	11.8	57.6
9th	13.0	77.8	15.3	72.9
10th	22.2	100.0	27.1	100.0

Source: See Appendix C

cumulative income shares show that the lowest quintile of Northern and Southern households seems to have received nearly similar shares (7.6 per cent and 7.5 per cent respectively) while the Central region households received lower shares.

The top quintile of households in the Central region received 43.5 per cent of regional income. The top quintiles in the Northern and Southern regions received somewhat lower shares, 42.0 and 42.4 respectively. These shares of the lowest and highest quintiles of households indicate about the same degree of inequality in the Northern and Southern regions and more inequality in the Central region. If the lowest 50 per cent of total households are considered, their share of income accounted for slightly more than one-quarter of total income in all the regions (the highest share, in the South, was nearly 27 per cent). Consequently, the top 50 per cent of households received incomes 2.8 times higher, on average, than those of the lowest 50 per cent of households.

As to the size distribution of income by individuals the picture is slightly different. The income shares of the top 10 per cent of individuals is 4.0, 4.8 and 3.9 times higher than the income shares of the lowest 10 per cent of individuals in the Northern, Central and Southern regions respectively. There was an average of 2.4 persons per household in the lowest decile and of 9.2 persons per household in the highest decile. In the Central region the lowest 20 per cent of individuals received a higher income share than the lowest 20 per cent of total households. But the lowest 20 per cent of individuals receives an income share 3.8 times lower than the top 20 per cent of individuals.

These regional income distributions, whether by household or by individual, suggest that there is less inequality in the Northern and Southern regions, and both of these two regions had a similar pattern of distribution. In the Central region there is more inequality in the distribution of income than in the other parts of the country. This dispersion in the size distribution of income between the three regions is reflected in the contrast between three measures of income inequality that can be calculated.

A 1 Measures of Regional Income Inequality

Three measures of income inequality will be estimated. The first is the Gini ratio of concentration, the second is the standard deviation of logarithms of income and lastly the Williamson indices.

A 1 1 Gini Ratio of Concentration

As mentioned earlier, the ratio of concentration ranges from zero for complete equality to one for maximum inequality. The results of Gini ratios by regions are shown in Table (6.4). The computation has been carried out for the size distribution of cash or money income and for adjusted income for both distributions by household and by individual. In terms of cash income it seems that the Central region had a more equal distribution. In the Northern region the ratio suggests that there is a greater inequality. These results for cash income are similar for both distribution by household and by individual.

Using adjusted income, where income in kind and imputed rent is added to cash income, somewhat different results are arrived at. The Southern region preserves the lowest degree of inequality. The Central

region shows a greater inequality, especially for the distribution of income by individual, than the Northern region.

Table (6.4)

Gini Ratios of Concentration by Regions, 1971

Region	Households		Individuals	
	Cash Income	Adjusted Income	Cash Income	Adjusted Income
Northern	0.3964	0.3432	0.3190	0.2349
Central	0.3856	0.3552	0.3131	0.2929
Southern	0.3909	0.3300	0.2947	0.2245

Source: See Appendix C

The Lorenz curves, as shown in Figure (6), summarise the results of the ratios of concentration. The Central region's curve is further from the equality line, which implies greater inequality than the other regions. The intersection of the Southern - Northern curves implies the South has a more unequal distribution at high incomes, the North at lower incomes.

A 1 2 Standard Deviation of Logs of Income

The second measure is the standard deviation of logarithms of incomes. This index measures the dispersion about the mean. It is described as "less sensitive than the concentration ratio to large

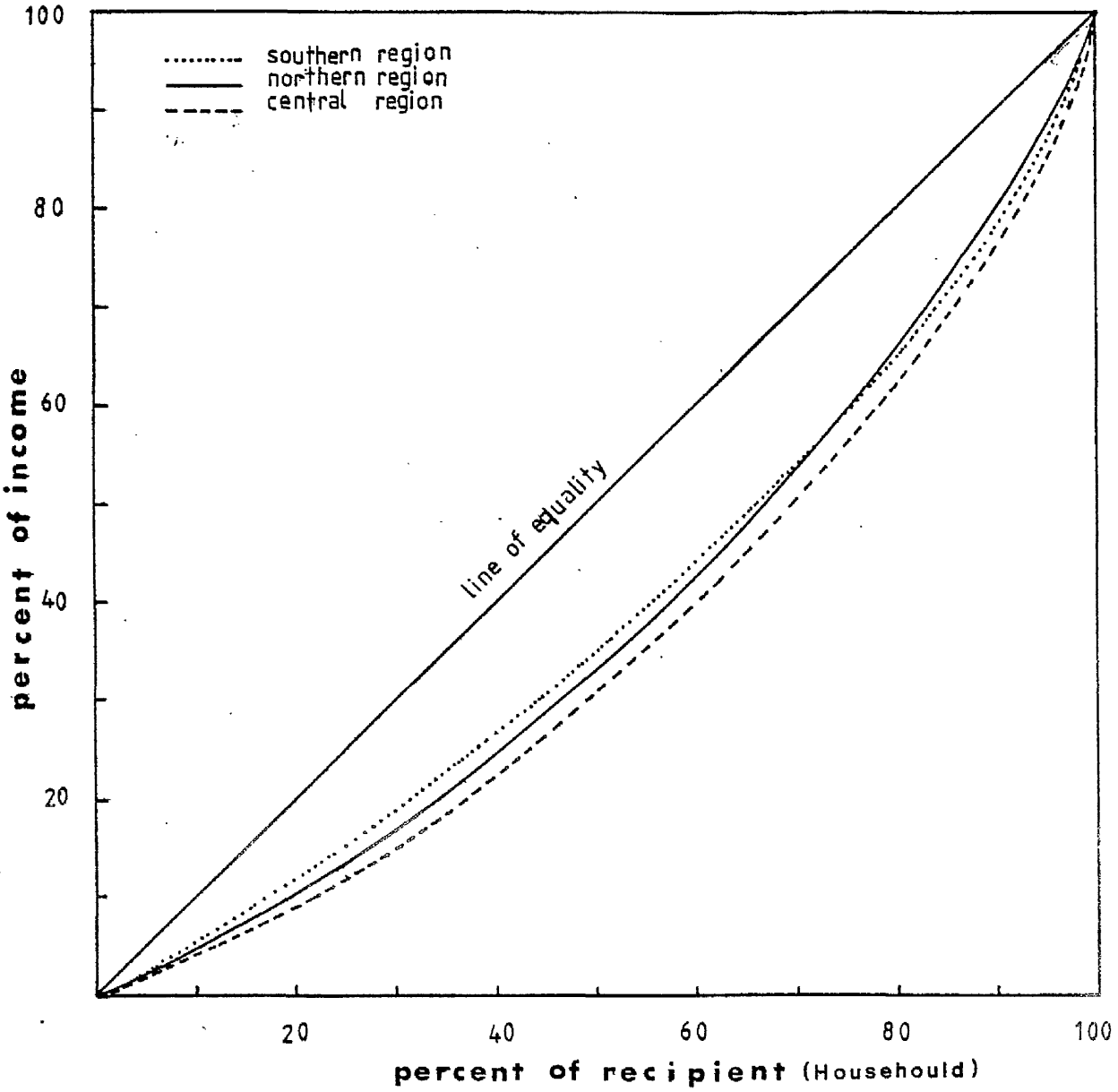

Fig. 6. Lorenz Curves for Income Distribution by Regions, 1971

Source: Tables (6.1, 6.2 and 6.3)

absolute income deviations and more responsive to relative income differentials over a wide frequency of units".[1]

The higher the standard deviation of logarithms of income, the greater are the differences among the incomes in general, and hence the greater is the inequality. Table (6.5) shows the standard deviations of logarithms of household income for both cash and adjusted incomes, by region. It is obvious that the Central region has a significantly greater inequality: the standard deviations of logarithms of income was the highest for both adjusted income (0.7519) and cash income (0.5694). The Northern region showed the lowest inequality judged by this measure.

Table (6.5)

Standard Deviations of Logarithms of Household Income by Regions, 1971

Region	Cash Income	Adjusted Income
Northern	0.2252	0.5173
Central	0.5694	0.7519
Southern	0.3286	0.5998

Source: See Appendix C

1 Kuznets, S., Quantitative..., op. cit., p. 17.

A 1 3 Williamson Indices

The third measure typically specified to measure the regional differences, was introduced by Williamson.[1] It deals with the most common indicator 'per capita income' as evidence of regional development. It is considered as an alternative measure of income inequality. Since several different indices are suggested, we have emphasized the two which seem most relevant to our purpose. The first,'Vw' is "a weighted coefficient of variation which measures the dispersion of the regional income per capita levels relative to the national average, while each regional deviation is weighted by its share in the national population; the higher the Vw the greater the size of geographical income differentials".[2]

As it is obvious that this index will be unnecessarily sensitive to a few extreme deviations in regional income, in such circumstances an 'Mw'index is thought more suitable. The Mw is defined as the sum of

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1 Williamson, J.G., "Regional Inequality and the Process of National Development", in Economic Development and Cultural Change, Vol. 13, No. 4, Part II, July 1965, pp. 1-88.

2 Williamson, J.G., ibid., p. 11.

the regional income differentials to the first power, signs disregarded.[1]

Data for the adjusted per capita and per household incomes from the 1971 income survey were used together with the associated population data collected in the same survey.

The Vw and Mw indices were calculated firstly, for an overall index for the country as a whole, through the figures for the 16 governorates. Secondly, the governorates of each region were used as a basis for calculating the intra-regional income differentials. The results of

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1 The formulae used are as follows:

$$Vw = \frac{\sqrt{\sum_{i=1}^{n}(Y_i - \bar{Y})^2 \frac{f_i}{n}}}{\bar{Y}}$$

$$Mw = \frac{\sum_{i=1}^{n}\left|Y_i - \bar{Y}\right| \frac{f_i}{n}}{\bar{Y}} \times 100$$

where: f_i = Population of the ith region

n = national population

Y_i = "income per capita" of the ith region

$\bar{Y}$ = national "income per capita"

i = 1, 2, 3 ... n.

The adaptation of the above formulae for the purpose of this study by the three Iraqi regions was as follows:

fi = the sample population of each governorate (households - individuals)

n = the total sample population of each region (households - individuals)

Y_i = income per household - or per capita - of the ith governorate

$\bar{Y}$ = national or regional - average of per household - and per capita - income.

national Vw and Mw are shown in Table (6.6) and both suggest greater disparity for the country as a whole. This finding is identical for both measurement by per household and per capita incomes.

Table (6.6)

Weighted Absolute Deviations of Per Household and Per Capita Adjusted Income by Region, 1971

Region	Vw		Mw	
	Per Household	Per Individual	Per Household	Per Individual
Northern	0.0975	0.1266	9.184	11.720
Central	0.1548	0.1464	13.046	12.127
Southern	0.1199	0.0842	11.009	7.686
All	0.2291	0.1918	19.907	17.498

Source: See Appendix C

Methods: See p. 182 in text.

It is clear, however, that judged by the Vw and Mw measures per household income is, on the whole, more unequally distributed than per capita income. This coincides with previous results for the size distribution of income by household and by individual.

The regional Vw and Mw, both by household and by individual show that the intra-regional disparity is most obvious in the Central region. The Southern region had a greater income dispersion than that found in the Northern region when the calculation was based on households, while the results are different when per individual Vw and Mw are considered.

The variations within each of these regions[1] as well as for the country as a whole are quite large and interesting. Within the Central region there is a significant difference, for example, between the per household income of Baghdad and Anbar governorates.[2]

B Regional Distribution of Income by Urban-Rural Areas

We also consider regional disparities in income distribution by urban-rural areas, and the division of economic and social activities along these lines. Table (6.7) shows the regional per household income, per capita income and two measures of income inequality, first the income shares of the lowest 20 per cent, lowest 50 per cent and top 20 per cent of households and second the Gini ratio of concentration for the urban and rural areas. The figures are shown in terms of both cash income and adjusted income, the latter including income in kind and imputed rent.

Inter-regional comparisons indicate higher per household and per capita incomes in the urban areas for both cash and adjusted incomes. The greatest income disparity between urban and rural areas is in the Southern region where the difference in per household, adjusted income

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1 It is also suggested that the larger the geographical size (the Central region accounts for nearly 55 per cent of total Iraqi area), the greater the degree of inequality (See Williamson, ibid., p. 11).

2 See Appendix C, Tables (C.16) and (C. 17).

TABLE (6.7)
Regional Distribution of Income by Urban-Rural Areas, 1971

(ID. and percentage)

	NORTHERN REGION				CENTRAL REGION				SOUTHERN REGION			
	URBAN		RURAL		URBAN		RURAL		URBAN		RURAL	
	Cash Income	Adj. Income	Cash Income	Adj. Income	Cash Income	Adj. Income	Cash Income	Adj. Income	Cash Income	Adj. Income	Cash Income	Adj. Income
Per Household Income	417	486	311	458	617	712	493	642	481	548	338	458
Per Capita Income	60	69	49	73	83	95	68	89	68	77	49	66
Income share of Lowest 20%	6.5	7.3	8.1	7.8	7.0	7.5	8.7	6.2	6.1	6.6	6.9	8.6
Income share of Lowest 50%	23.9	25.2	29.2	27.8	24.6	25.5	29.9	24.7	23.5	24.2	24.8	29.7
Income share of Top 20%	44.6	43.3	41.5	40.6	44.7	43.9	38.1	42.7	47.1	46.1	44.1	38.8
Gini Ratio	0.3797	0.3595	0.3975	0.3257	0.3684	0.3891	0.3964	0.3716	0.3973	0.3795	0.3688	0.2971

Source: See Appendix C

was 16.4 per cent. This figure was only 10 per cent and 6 per cent in the Central and Northern regions respectively.

Per household and per capita incomes for both urban and rural areas are greater in the Central region than in the other regions. In the urban areas, the Northern region had the lowest per household income, 11.3 per cent less than the average for the Southern region and 31.7 per cent less than the Central region's average. The rural areas' average per household income is similar in the Northern and Southern regions but 29 per cent less than that of the Central region's average.

In terms of income inequality measured by the share of adjusted income received by the lowest 20 per cent and 50 per cent of households, it emerges from Table (6.7) that intra-regional incomes are more equally distributed in the rural areas of the Southern and Northern regions. In the Central region, by contrast, the shares of these groups are slightly higher in the urban areas than they are in the rural areas. At the other end of the income scale, the shares of the top 20 per cent of households are very high in all regions and areas. The income shares of the top 20 per cent is on average 5.4 and 6.2 times higher than the income shares of the lowest 20 per cent of households in the rural and urban areas respectively. The rural areas of the Southern region had the least difference between the top and bottom quintiles, but the urban areas had the sharpest difference of all regions.

The Gini ratio of concentration summarizes these findings and the national Gini ratio of concentration is used to clarify regional differences in the degree of income inequality. Table (6.8) shows the regional urban and rural areas' Gini ratios transformed into indices

of relative equality. (The national Gini ratio is taken as a base of 100 and cash and adjusted incomes are distinguished.[1])

Table (6.8)

Ranking of Regions according to Ratio of Concentration, 1971*

National Ratio = 100

URBAN AREAS				RURAL AREAS			
Cash Income		Adjusted Income		Cash Income		Adjusted Income	
(S)**	102.8	(C)	105.6	(N)	99.3	(C)	108.8
(N)	98.3	(S)	103.0	(C)	99.0	(N)	95.5
(C)	95.3	(N)	97.6	(S)	92.1	(S)	86.9

* Inequality measure ranked from most unequal to less

** The symbols N = Northern region, C = Central region and S = Southern region.

Source: See Appendix C and Tables (C.4 to C.9).

These indices suggest that the variation in the Gini ratio between the regions and areas, either by cash or adjusted incomes was not high in general (it ranked between 7.2 per cent to 8 per cent),the only exception being the Central region's rural areas adjusted income which was 21.9 per cent higher than that of the Southern region, which was the lowest. Regional variations in the difference between urban and rural

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1 See similar approach dealt with regional comparison by W.O. Gunther and C.G. Leather, "Income Inequality in Depressed Regions: Some Empirical Evidence", Land Economics, May 1974, pp. 176-180.

areas are less pronounced when cash rather than adjusted incomes are considered.

C Regional Distribution of Income by Socio-economic Groups

C 1 Occupational Structure

Table (6.9) shows the regional occupational structure, the mean income and the coefficient of variation. The table facilitates some important observations. The most obvious is that the most qualified and skilled occupational group (professional and administrative) is small in absolute and relative terms in all regions. Two thirds of the total number of these two occupations are in the Central region. Here, the average income of the professionals is higher by nearly one third and one quarter than the average income of the professionals in the Southern and Northern regions respectively. The administrative average income in the Central region was two thirds higher than that of the Northern and Southern regions. The coefficients of variation of these two occupations are the lowest amongst occupations in all regions.

In the Northern and Southern regions, farmers represented nearly half the total employed. Only slightly more than one quarter of the total employed were farmers in the Central region. This was not surprising since the Central region was the focus of highly concentrated industrial activity as well as other non-agricultural sectors. This also explains why the number of production process workers was highest in the Central region. Their earnings were also higher than those of

TABLE (6.9)
Occupational Structure by Regions - adjusted income 1971

OCCUPATION	NORTHERN REGION				CENTRAL REGION				SOUTHERN REGION			
	House-hold %	In-come %	Mean Income ID.	Coeff. of Vrtn.	House-hold %	In-come %	Mean Income ID.	Coeff. of Vrtn.	House-hold %	In-come %	Mean Income ID.	Coeff. of Vrtn.
Professional, Technical & Related Workers	2.8	4.6	777	0.5591	5.0	8.1	1115	0.5775	2.0	3.4	852	0.3604
Administrative & Managerial Workers	0.1	0.1	486	o	1.0	2.7	1904	0.3976	-	-	-	-
Clerical & Related Workers	5.9	6.1	489	0.5738	10.2	9.8	657	0.6981	5.0	6.3	627	0.8783
Sales Workers	7.9	8.3	505	0.7989	9.6	10.9	778	0.7213	8.7	11.1	641	0.7675
Services Workers	5.8	5.2	432	0.5677	10.1	7.5	512	0.8225	8.7	7.6	442	0.7890
Farmers & Related Workers	52.0	52.5	482	0.9904	26.5	25.6	666	0.6776	46.9	44.4	474	0.6781
Production Process, Trans. & Related Workers	15.1	13.5	431	0.7152	24.0	19.7	565	0.6248	14.3	12.4	434	0.6590
Others & Non-specified workers	10.3	9.7	450	0.9091	13.7	15.7	788	0.7204	14.4	14.8	516	0.6954
TOTAL	100.0	100.0	479	0.8832	100.0	100.0	687	0.7361	100.0	100.0	501	0.7257

Source: See Appendix C

their counterparts in the other two regions.

From the coefficients of variation it seems that the dispersion of income is higher for farmers in all regions than for the production process workers. Ownership of land could partly explain these variations. It is also clear that the adjusted average income of farmers is higher than that of workers. The highest differences are found in the Central region.

Tables (6.10, 6.11 and 6.12) show the size distribution of income by occupation in each region. One finds that, on average, two thirds of the total clerical, sales and services workers were in the lowest income group (i.e. below ID. 500 in the Northern and Southern regions). The actual proportion was less in the Central region. In the top income groups, the percentage of farmers is much higher than the percentage of production process workers in all regions, but the percentages of both occupations in the top income groups were lowest in the Southern region.

C 2 Work Status

'Work Status' refers to whether the workers are employers, self-employed or employees.

Table (6.13) shows the breakdown of work status between agricultural and non-agricultural sectors, the relative importance of each kind of employment, their adjusted income, and the coefficient of variation on a regional basis. Agricultural and non-agricultural employers were relatively small in number while they earned the highest

TABLE (6.10)
Distribution of Adjusted Income by Occupation, Northern Region, 1971
(First figure related to column percentage, second figure to row percentage)

Occupation / Income Groups (Per year ID)	1-99	100-149	150-199	200-249	250-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1249	1250 & Over	Total
Professional and	0	0	3.1	0	0	0.9	3.6	3.3	1.7	12.3	0	7.6	9.9	10.6	2.8
Technical Workers	0	0	8.2	0	0	5.7	16.4	12.3	4.1	20.5	0	8.2	12.3	12.3	100.0
Administrative and	0	0	0	0	0	0	0.9	0	0	0	0	0	0	0	0.1
Managerial Workers	0	0	0	0	0	0	100.0	0	0	0	0	0	0	0	100.0
Clerical and	0	0	5.2	7.5	6.1	5.5	4.8	5.9	4.0	7.4	12.9	16.6	9.9	0	5.9
Related Workers	0	0	6.6	15.7	11.8	16.0	10.5	10.5	4.7	5.9	3.9	8.6	5.9	0	100.0
Sales Workers	9.0	8.2	1.5	10.8	6.1	9.1	6.3	12.5	5.0	2.5	0	15.1	6.6	14.2	7.9
	1.5	3.5	1.5	17.0	8.9	19.8	10.3	16.8	4.4	1.5	0	5.9	3.0	5.9	100.0
Services Workers	0	3.5	4.6	7.5	10.6	5.4	3.9	2.2	5.7	12.3	19.3	0	6.6	0	5.8
	0	2.0	6.0	16.0	20.7	16.0	8.7	4.0	6.7	10.0	6.0	0	4.0	0	100.0
Farmers and	30.3	40.3	51.6	44.3	57.1	54.3	63.1	53.6	57.2	47.5	33.1	31.4	57.0	44.1	52.0
Related Workers	0.8	2.6	7.5	10.6	6.5	17.9	15.7	10.9	7.6	4.3	1.1	1.9	3.8	2.8	100.0
Production Process	26.9	6.9	14.5	21.0	12.0	17.7	13.9	17.6	10.7	14.7	34.7	11.3	6.6	3.5	15.1
Workers	2.3	1.5	7.2	17.3	9.0	20.1	11.9	12.3	4.9	4.6	4.1	2.3	1.5	0.2	100.0
Others and	33.8	41.1	19.4	8.9	7.9	7.1	3.6	4.8	15.7	3.4	0	18.0	3.3	27.5	10.3
Non-specified Workers	4.2	13.4	14.1	10.7	8.8	11.9	4.5	4.9	10.6	1.6	0	5.4	1.1	8.8	100.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	1.3	3.4	7.5	12.4	11.3	17.2	13.0	10.5	6.9	4.7	1.8	3.1	3.5	3.3	100.0

Source: See Appendix C.

TABLE (6.11)
Distribution of Adjusted Income by Occupation, Central Region, 1971
(First figure related to column percentage, second to row percentage)

Occupation \ Income Groups (Per year ID)	1-99	100-149	150-199	200-249	250-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1249	1250 & over	Total
Professional and	0	0	0	1.4	0	1.9	2.2	2.9	5.6	4.9	6.3	16.1	5.5	15.5	5.0
Technical Workers	0	0	0	1.5	0	5.9	5.9	5.9	8.9	7.4	6.5	13.4	7.4	37.1	100.0
Administrative and	0	0	0	0	0	0	0	0	0	1.0	0	1.8	0.	6.8	1.0
Managerial Workers	0	0	0	0	0	0	0	0	0	7.7	0	7.7	0	84.6	100.0
Clerical and	26.9	18.4	4.9	12.2	10.9	11.3	11.4	10.4	4.7	7.9	13.0	8.9	10.4	9.9	10.2
Related Workers	1.0	3.0	1.5	6.4	6.8	17.8	14.9	10.5	3.6	5.8	6.6	3.6	6.8	11.7	100.0
Sales Workers	26.9	12.2	5.8	7.5	6.9	6.5	10.6	13.0	6.5	4.9	8.7	5.4	19.2	13.7	9.6
	1.1	2.1	1.8	4.2	4.6	10.8	14.7	13.9	5.4	3.9	4.6	2.3	13.4	17.0	100.0
Services Workers	0	10.5	4.9	12.5	17.4	14.6	15.3	10.8	12.5	6.9	4.9	5.4	5.5	1.2	10.1
	0	1.8	1.5	6.6	11.0	23.1	20.1	11.0	9.8	5.2	2.5	2.2	3.7	1.5	100.0
Farmers and	0	35.0	35.1	25.8	28.3	23.5	23.1	27.3	32.5	29.6	25.4	29.6	25.5	24.2	26.5
Related Workers	0	2.2	4.1	5.2	6.9	14.2	11.6	10.6	9.8	8.4	4.9	4.7	6.5	10.9	100.0
Production Process	19.4	4.4	24.7	25.7	33.0	32.7	28.0	21.5	24.3	29.7	27.5	19.7	14.3	8.7	24.0
Workers	0.3	0.3	3.1	5.7	8.8	21.8	15.5	9.2	8.1	9.3	5.9	3.4	4.0	4.3	100.0
Others and	26.9	19.4	24.7	14.9	3.5	9.5	9.5	14.1	14.0	15.1	14.1	13.2	19.6	20.0	13.7
Non-specified Workers	0.8	2.4	5.5	5.8	1.6	11.1	9.2	10.6	8.2	8.4	5.3	4.0	9.7	17.5	100.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	0.4	1.7	3.1	5.4	6.4	16.0	13.3	10.3	8.0	7.5	5.1	4.2	6.7	12.0	100.0

Source: See Appendix C.

TABLE (6.12)
Distribution of Adjusted Income by Occupation, Southern Region, 1971
(First figure related to column percentage, second to row percentage)

Occupation \ Income Groups (Per year ID)	1-99	100-149	150-199	200-249	250-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1249	1250 & Over	Total
Professional and	0	0	0	0	0	0	2.0	2.9	1.9	7.0	7.6	7.0	10.8	5.8	2.0
Technical Workers	0	0	0	0	0	0	16.1	13.5	6.8	9.4	13.5	6.8	20.3	13.5	100.0
Administrative and	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Managerial Workers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clerical and	0	0	3.5	3.6	5.0	6.5	5.1	2.9	3.8	5.0	3.8	0	10.8	11.7	5.0
Related Workers	0	0	5.5	6.5	10.3	25.6	16.8	5.5	5.5	2.7	2.7	0	8.2	10.9	100.0
Sales Workers	21.0	5.6	13.0	6.1	6.7	4.4	4.1	10.7	14.8	7.0	7.6	23.7	18.1	20.4	8.7
	1.6	1.6	11.6	6.3	7.9	10.0	7.9	11.6	12.2	2.2	3.1	5.3	7.9	11.0	100.0
Services Workers	0	0	20.0	15.8	7.2	6.9	6.9	5.8	5.7	24.0	11.3	0	3.6	5.8	8.7
	0	0	18.0	16.4	8.5	15.8	13.2	6.3	4.7	7.5	4.7	0	1.6	3.2	100.0
Farmers and	0	34.3	37.5	47.8	53.9	51.7	53.7	51.6	50.4	41.8	41.8	29.0	27.2	30.0	46.9
Related Workers	0	1.8	6.2	9.1	11.7	21.9	19.0	10.4	7.7	2.4	3.2	1.2	2.2	3.0	100.0
Production Process	0	22.3	15.8	12.8	11.2	21.7	16.0	14.4	6.4	10.1	11.3	0	12.2	5.8	14.3
Workers	0	3.8	8.6	8.0	8.0	30.2	18.6	9.6	3.2	1.9	2.9	0	3.2	1.9	100.0
Others and	79.0	37.8	10.1	13.9	15.9	8.9	12.3	11.8	17.0	5.0	16.6	40.3	17.2	20.4	14.4
Non-specified Workers	3.6	6.4	5.5	8.7	11.3	12.3	14.2	7.7	8.5	1.0	4.2	5.5	4.5	6.7	100.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	0.7	2.4	7.8	9.0	10.2	19.9	16.6	9.5	7.2	2.7	3.6	2.0	3.8	4.7	100.0

Source: See Appendix C.

TABLE (6.13)
Work Status by Regions - adjusted income, 1971

OCCUPATION	NORTHERN REGION				CENTRAL REGION				SOUTHERN REGION			
	House-hold %	In-come %	Mean In-come ID.	Coeff. of Vrtn.	House-hold %	In-come %	Mean In-come ID.	Coeff. of Vrtn.	House-hold %	In-come %	Mean In-come ID.	Coeff. of Vrtn.
Agricultural Sector												
Employers	0.1	0.2	888	0	0.5	0.6	914	0.5937	0.4	1.0	1260	0.8882
Self-employed	45.9	47.3	484	0.6598	23.4	23.8	698	0.6505	34.4	30.9	434	0.6079
Employees	6.9	5.1	345	0.5432	3.5	2.3	458	0.7011	12.4	13.0	526	0.7193
Non-Agricultural Sector												
Employers	0.6	0.9	695	0.2946	2.2	4.0	1221	0.7518	0.3	0.9	1683	0.2496
Self-employed	13.0	14.0	506	0.7999	17.7	18.7	727	0.7602	14.5	17.0	588	0.8010
Employees	23.2	22.6	459	0.6492	39.2	35.0	615	0.7338	23.6	22.4	475	0.7163
Others & Non-specified	10.0	9.9	450	0.9091	13.6	15.6	788	0.7230	14.4	14.8	517	0.6954
TOTAL	100.0	100.0	470	0.7062	100.0	100.0	687	0.7361	100.0	100.0	501	0.7257

Source: See Appendix C

mean income in all regions. Their mean income was highest in the Southern region. Non-agricultural employers earn a larger income than employers in the agricultural sector in the Southern and Central regions.

In all regions, however, the self-employed, who are in the majority in the agricultural sector, have a mean income that is much lower than their counterparts in the non-agricultural sector. This is clearest in the Southern region where the difference is slightly more than one quarter. This suggests a higher return to capital and labour factors in the non-agricultural sector than to the land and labour factors in agriculture.

With respect to inter-regional income differentials of employees, the figures show that agricultural employees in the Southern region received a mean income one third higher than that of the Northern region and nearly 13 per cent higher than that of the Central region. It is also clear, that in the Northern and Central regions, the mean income of employees in the non-agricultural sector was higher by one quarter than that of agricultural employees. The Southern region was an exception with the mean income of the agricultural employees being higher than that of the non-agricultural employees.

The size distribution of adjusted incomes by work status for the three regions are shown in Tables (6.14, 6.15 and 6.16). The tables identify the position of each type of employment on the income scale.

TABLE (6.14)
Distribution of Adjusted Income by Work Status, Northern Region, 1971
(First figure related to column percentage, second figure to row percentage)

Work Status \ Income Groups (per year ID)	1-99	100-149	150-199	200-249	250-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1249	1250 & Over	Total
AGRICULTURE SECTOR															
Employers	0	0	0	0	0	0	0	0	0	0	6.4	0	0	0	0.1
	0	0	0	0	0	0	0	0	0	0	100.0	0	0	0	100.0
Self-employed	21.4	30.8	45.2	33.4	49.1	43.8	61.8	46.9	54.9	47.5	26.7	31.4	57.0	44.1	45.9
	0.6	2.3	7.4	9.1	12.2	16.4	17.5	10.7	8.3	4.9	1.1	2.1	4.4	3.2	100.0
Employees	9.0	9.5	6.4	10.0	9.0	13.4	1.2	7.3	2.3	2.5	6.4	0	3.3	0	6.9
	1.7	4.6	7.0	18.0	14.7	33.3	2.3	11.0	2.3	1.7	1.7	0	1.7	0	100.0
NON-AGRICULTURE SECTORS															
Employers	0	0	0	0	0	0	0.9	1.1	0	4.9	0	0	3.3	0	0.6
	0	0	0	0	0	0	20.0	20.0	0	40.0	0	0	20.0	0	100.0
Self-employed	9.0	8.2	4.6	19.2	7.2	14.0	11.1	20.5	14.0	7.4	32.2	11.3	6.6	17.7	13.0
	0.9	2.1	2.7	18.4	6.3	18.6	11.1	16.4	7.5	2.7	4.5	2.7	1.8	4.5	100.0
Employees	26.9	10.4	24.4	28.5	26.8	21.6	21.4	19.4	13.0	34.4	28.2	39.3	26.5	10.6	23.2
	1.5	1.5	7.9	15.3	13.1	16.0	12.0	8.7	3.9	7.0	2.2	5.2	4.0	1.5	100.0
Others and Non-specified	33.8	41.1	19.4	8.9	7.9	7.1	3.6	4.9	15.7	3.4	0	18.0	3.3	27.5	10.3
	4.2	13.4	14.1	10.7	8.8	11.9	4.5	4.9	10.6	1.6	0	5.4	1.1	8.8	100.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	1.3	3.4	7.5	12.5	11.4	17.2	13.0	10.4	6.9	4.7	1.8	3.1	3.5	3.3	100.0

Source: See Appendix C.

TABLE (6.15)
Distribution of Adjusted Income by Work Status, Central Region, 1971
(First figure related to column percentage, second figure to row percentage)

Work Status \ Income Groups (Per year ID)	1-99	100-149	150-199	200-249	250-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1249	1250 & Over	Total
AGRICULTURE SECTOR															
Employers	0	0	0	0	0	0	0.8	1.0	0	1.4	0	0	0	1.5	0.5
	0	0	0	0	0	0	21.2	21.2	0	21.1	0	0	0	36.5	100.0
Self-employed	0	12.2	20.2	20.6	25.6	19.4	20.2	25.6	30.2	28.2	25.4	27.2	25.5	22.7	23.4
	0	0.9	2.6	4.7	7.0	13.2	11.5	11.2	10.3	9.1	5.6	4.8	7.3	11.6	100.0
Employees	0	22.8	14.9	3.8	2.8	4.5	3.2	2.9	4.1	1.0	0	2.5	1.1	1.9	3.5
	0	11.0	13.2	5.9	5.1	20.9	12.3	8.6	9.4	2.1	0	3.0	2.1	6.4	100.0
NON-AGRICULTURE SECTORS															
Employers	0	0	0	0	0	0.9	3.3	2.2	0	2.0	0	1.8	4.4	7.4	2.2
	0	0	0	0	0	6.7	20.0	10.0	0	6.7	0	3.3	13.3	40.0	100.0
Self-employed	46.3	22.8	10.7	15.8	8.5	13.4	20.5	21.7	18.7	14.8	20.3	14.3	30.2	16.8	17.7
	1.0	2.2	1.8	4.8	3.1	12.1	15.5	12.6	8.4	6.3	5.9	3.4	11.5	11.4	100.0
Employees	26.9	22.8	29.5	44.8	59.6	52.3	42.5	32.6	33.0	37.6	40.2	42.9	19.2	29.8	39.2
	0.3	1.0	2.3	6.1	9.8	21.3	14.5	8.6	6.7	7.2	5.3	4.6	3.3	9.1	100.0
Others and Non-specified workers	26.9	19.4	24.7	14.9	3.5	9.5	9.5	14.1	14.0	15.1	14.1	11.4	19.6	20.0	13.6
	0.8	2.4	5.5	5.9	1.6	11.1	9.3	10.7	8.2	8.4	5.3	3.5	9.7	17.6	100.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	0.4	1.7	3.1	5.4	6.4	16.0	13.3	10.3	8.0	7.5	5.1	4.2	6.7	12.0	100.0

Source: See Appendix C.

TABLE (6.16)
Distribution of Adjusted Income by Work Status, Southern Region, 1971
(First figure related to column percentage, second to row percentage)

Work Status \ Income Groups (Per year ID)	1-99	100-149	150-199	200-249	250-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	1000-1249	1250 & Over	Total
AGRICULTURE SECTOR															
Employers	0	0	0	0	0	1.0	0	0	0	0	0	0	0	4.0	0.4
	0	0	0	0	0	50.0	0	0	0	0	0	0	0	50.0	100.0
Self-employed	0	21.0	33.3	35.2	39.1	37.7	39.2	36.8	42.5	34.9	31.4	29.0	12.2	9.9	34.4
	0	1.5	7.5	9.2	11.6	21.8	18.9	10.1	8.9	2.7	3.3	1.6	1.3	1.3	100.0
Employees	0	13.3	4.2	14.7	12.9	13.0	14.5	14.8	7.9	7.0	10.5	7.0	18.6	16.1	12.4
	0	2.6	2.6	10.6	10.6	20.9	19.3	11.3	4.6	1.5	3.0	1.1	5.7	6.1	100.0
NON-AGRICULTURAL SECTORS															
Employers	0	0	0	0	0	0	0	0	0	0	0	0	0	5.8	0.3
	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	100.0
Self-employed	21.0	11.2	23.5	15.8	6.7	11.3	8.8	16.4	16.7	12.0	22.7	23.7	25.3	26.2	14.5
	0.9	1.9	12.6	9.8	4.7	15.4	9.4	10.7	8.3	2.2	5.7	3.2	6.6	8.5	100.0
Employees	0	16.8	28.8	20.4	25.3	28.1	25.8	20.2	16.0	41.1	18.9	0	26.7	17.5	23.6
	0	1.7	9.5	7.7	10.9	23.7	18.1	8.1	4.9	4.7	2.9	0	4.3	3.5	100.0
Others and Non-specified	79.0	37.8	10.1	13.9	15.9	8.9	12.3	11.8	17.0	5.0	16.6	40.3	17.2	20.4	14.4
	3.6	6.4	5.5	8.7	11.3	12.3	14.2	7.7	8.5	1.0	4.2	5.5	4.5	6.7	100.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	0.7	2.4	7.8	9.0	10.2	19.9	16.6	9.5	7.2	2.7	3.6	2.0	3.8	4.7	100.0

Source: See Appendix C.

D Distribution of Income by Governorates

In this section we consider the distribution of adjusted income by household across the 16 governorates in 1971, and attempt to explain the income differences that appear.

Five measures of income inequality have been chosen to identify the degree of inequality in the distribution of income that prevailed in 1971. The measures include the Gini ratio of concentration, the coefficient of variation, the standard deviation of logs of income, the income share of lowest quintile and the share of the highest quintile of households. These measures are commonly used in income distribution studies and especially in international[1] and regional[2] comparisons of income inequality. Each of these measures emphasizes a different aspect of the distribution of income and hence "their combined utilization may give a fair approximation of the degree of inequality of income distribution".[3]

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1 Kravis, Irving B., "International Differences in the Distribution of Income", Review of Economics and Statistics, Vol. 42, November 1960, pp. 408-416; Kuznets, S., "Quantitative ...", op. cit.; Oshima, H., "The International Comparison of Size Distribution of Family Incomes with Special Reference to Asia", Review of Economics and Statistics, Vol. XL, November 1962.

2 Kuznets, S., "Quantitative ...", op. cit.; Gunter, W.G. and Leathers, C.G., "Income Inequality", op. cit.; Verway, D., "A Ranking of States by Inequality using Census and Tax Data", Review of Economics and Statistics, Vol. XLVIII, No. 1, February 1966.

3 Ewusi, K., "Notes on the Relative Distribution of Income in Developing Countries", Review of Income and Wealth, Vol. 17, December 1971, p. 373.

Table (6.17) shows the governorates in alphabetical order with per household income, and the results of the five mentioned measures of income inequality. As might be expected, the degree of inequality differs according to the index used. All the measures indicate that Sulaimaniya governorate has the most equal distribution of income. Thi-Qar, Qadisiya, Wasit and Kerbela governorates enjoy less inequality than the other governorates. This is clear from the Gini ratio, the coefficient of variation and the income share of the top 20 per cent. It is also indicated to some extent by the other measures.

The governorates can be divided into three groups. The index for the country as a whole - or the national index (100) - was the basis for comparing and grouping the governorates.

Table (6.18) shows the ranking of these governorates, from those with the highest income inequality (Group 1) to those with the lowest (Group 3). There are some exceptions to this grouping in certain cases. For example, the income share of the lowest 20 per cent indicates a different grouping for Arbil (Group 1) and Kerbela (Group 3) from the other indices. Similarly, with the income share of the top 20, Nineveh appears in Group 1, and Maysan and Muthanna appear in Group 2.

These groupings are not consistently reflected in the rankings according to all the inequality measures, as these reflect different aspects of distribution, but on the whole they seem justifiable.

Closer examination of the first group shows that it includes those governorates that achieved the highest growth rates during the period 1956-1971.[1] Specifically the first three governorates, Babylon, Basrah

1 See Table (3.3), p. 46.

Table (6.17)

Measures of Income Inequality and Mean Household Adjusted Income by Governorate, 1971

Governorate	Mean Household Income (ID.)	Income Share of		Coefficient of Variation	Gini Ratio of Concent-ration	Standard Deviation of Logs of Income
		Lowest Quintile	Highest Quintile			
Anbar	468	7.8	41.6	0.6988	0.3495	0.3474
Arbil	414	8.8	43.2	0.7918	0.3518	0.3938
Babylon	685	5.5	45.1	0.7809	0.3926	0.3877
Baghdad	767	7.4	42.8	0.7201	0.3474	0.3366
Basrah	578	6.2	43.1	0.7020	0.3532	0.3855
Dhok	451	8.0	44.1	0.7556	0.3548	0.3607
Diala	541	7.8	40.0	0.6431	0.3152	0.4152
Kerbela	504	6.7	39.7	0.6017	0.3249	0.3731
Kirkuk	512	7.6	43.2	0.7190	0.3489	0.3749
Maysan	436	8.3	43.5	0.8041	0.3412	0.3826
Muthanna	500	8.6	46.5	0.8056	0.3518	0.3296
Nineveh	438	6.9	41.0	0.7158	0.3595	0.4028
Qadisiya	443	8.6	40.8	0.7361	0.3201	0.3344
Sulaimaniya	537	9.0	37.9	0.5379	0.2656	0.2944
Thi-Qar	463	8.5	38.6	0.5764	0.3007	0.4009
Wasit	714	8.1	42.0	0.6732	0.3220	0.3438
IRAQ	577	7.0	44.0	0.7598	0.3615	0.3955

Note: The table ranks the Governorates in alphabetical order.

Source: See Appendix C.

Table (6.18)

Indices of Income Inequality Ranked by Groups According to Degree of Inequality by Governorate, 1971

(National Index = 100)

	Income Share of Lowest Quintile	Rank	Income Share of Highest Quintile	Rank	Coefficient of Variation	Rank	Gini Ratio of Concentration	Rank	Standard Deviation of Logs of Income	Rank
GROUP 1 Highest Inequality										
Babylon	78.6	1	102.5	2	102.8	4	108.6	1	98.0	5
Nineveh	98.6	4	93.2	11	94.2	9	99.4	2	101.8	2
Basrah	88.6	2	97.9	7	92.4	10	97.7	4	97.5	6
Dhok	114.3	9	100.2	3	99.4	5	98.1	3	91.2	10
Arbil	125.7	15	98.2	5	104.2	3	97.3	6	99.6	4
GROUP 2 Moderate Inequality										
Maysan	118.6	11	98.9	4	105.8	2	94.4	10	96.7	7
Muthanna	122.9	14	105.7	1	106.0	1	97.3	5	83.3	15
Kirkuk	108.6	6	98.2	6	94.6	8	96.5	8	94.8	8
Baghdad	105.7	5	97.3	8	94.8	7	96.1	9	85.1	13
Anbar	111.4	7	94.5	10	91.9	11	96.7	7	87.8	11
Diala	111.4	8	90.9	13	84.6	13	87.2	14	105.0	1
GROUP 3 Lowest Inequality										
Kerbela	95.7	3	90.2	14	79.2	14	89.9	11	94.3	9
Wasit	115.7	10	95.5	9	88.6	12	89.1	12	86.9	12
Qadisiya	122.9	13	92.7	12	96.9	6	88.5	13	84.6	14
Thi-Qar	121.4	12	87.7	15	75.9	15	83.2	15	101.4	3
Sulaimaniya	128.6	16	86.1	16	70.8	16	73.5	16	74.4	16

Note: Inequality measures ranked from most unequal (1,2 ...) to most equal (... 15, 16).

Source: See Appendix C.

and Nineveh with the highest inequality. These governorates also share a tendency to relatively greater industrialization and have undergone notable structural change with agriculture representing a declining proportion of their economic activity.[1]

On the other hand, the governorates of Group 3, with the lowest degree of inequality are found to have agriculture comprising almost three-quarters of their economic activity.

Column 1 of the Table (6.17) shows per household income together with the measures of inequality. Baghdad governorate with the highest per household income does not have the greatest inequality, if reliance is placed on the broad groupings suggested in Table (6.18). But it does have the greatest inequality if the standard deviation of logs of income alone is considered, and to some extent this holds for the Gini ratio as well. From the results of four out of five measures, the Wasit, Diala and Sulaimaniya governorates show inequality varying inversely with income levels, and thus support the hypothesis of an inverse relation between income level and inequality.[2] The governorates of Arbil, Dhok and Nineveh show a positive correlation between inequality and low per household income using the Gini ratio, standard deviation of logs of income and the coefficient of variation. This pattern of close association between low income levels and high income inequality is most characteristic of the Northern region, where overall GNP (excluding oil wages) per worker was lowest and where income in kind,

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1 See Table (3.4), p. 49.

2 Kravis, op. cit., p. 410.

embodied in adjusted income, was highest.

Since these five measures of inequality each cover varying aspects of the inequality in income distribution, their correlation is considered in Table (6.19), which shows the coefficients of simple linear correlation. The standard deviation of logs of income appears to be strongly correlated with the other measures with the exception of the Gini ratio. The share of the top 20 is correlated with the coefficient of variation and with the standard deviation of logs of income. The standard deviation and the Gini ratio are the measures that most clearly portray the degree of inequality in any given income distribution.

Table (6.19)

Coefficients of Correlation Between Measures of Inequality, 16 Governorates of Iraq, 1971

Measure of Inequality	Gini Ratio of Concentration	Standard Deviation of Logs of Income	Coefficient of Variation	Income Share of Top 20 per cent	Income Share of Lowest 20 per cent
Gini Ratio of Concentration	1.0000				
Standard Deviation of Logs of Income	0.3721				
Coefficient of Variation	0.1343	0.7976			
Income Share of Top 20 per cent of Households	0.0234	0.8107	0.8923		
Income Share of Lowest 20 per cent of Households	-0.4094	-0.6151	-0.1041	-0.2390	1.0000

Source: See Appendix C.

CHAPTER VII

Analysis of Income Distribution

A Introduction

This chapter examines the relationship between the size distribution of income and economic and social factors. Given that development is a dynamic process, data on the distribution of income should ideally be time series data. However, Paukert in his survey of evidence on income distribution has proposed the alternative that "one can compare income distribution in a number of countries at different levels of development and try to draw conclusions by cross-country analysis".[1] The absence of adequate time series data in Iraq has forced this examination to use the cross-sectional approach.[2]

Adelman and Morris in their study[3] referred to the fact that "little explicit theorizing has been done about the determinants of the size distribution of income among individuals except for a few elegant models in which income distribution is determined by stochastic processes

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1 Paukert, Felix, "Income Distribution at Different Levels of Development: A survey of Evidence", International Labour Review, August-September 1973, p. 101.

2 Ahluwalia, Montek, S., produced three contributions on the subject: (a) with others, such as Hollis Chenery and C.L.G. Bell, Redistribution with Growth, published for the World Bank and the Institute of Development Studies, University of Sussex, Oxford University Press, 1974, Part I, Chapter I, pp. 3-37; (b) "Income Distribution and Development: Some Stylized Facts" in American Economic Review, Vol. 66, No. 2, May 1976, pp. 128-135; (c) "Inequality, Poverty and Development" in Journal of Development Economics, Vol. 3, January 1976, pp. 307-342.

3 Adelman, I. and Morris, C.T., Economic Growth and Social Equity in Developing Countries, Stanford University Press, 1973, p. 142.

marginally related to basic economic forces. In contrast, empirical studies of income variation have yielded a variety of hypotheses and some sketchy evidence on the impact of such influences as industrialization, level of education, distribution of wealth, etc."

The technique used in this investigation was multiple-regression analysis. The objective was to evaluate the contribution of specific variables in explaining the nature of the various distributions of income in Iraq.

The data used were based on the 1971 figures for the size distribution of income by households and other variables (discussed in Chapters II & III), for the 16 governorates of Iraq. The whole set of the dependent and independent variables are shown in Appendix D.

The figures for the rural areas are considered first, then the urban areas and lastly the country as a whole.

This chapter will cover the following:

B Statistical Method

C The Variables and the Statistical Data

D The Statistical Results

- D 1 The Kuznets Hypothesis
- D 2 Economic Structure and Growth Rates
- D 3 Population Growth Rates
- D 4 Education

E Evaluation and Summary

B Statistical Method

The procedure adopted was to consider the whole set of economic and social variables with respect to the income shares of the different percentile groups of households and the Gini ratios. The multi-regression method adopted used a "forward stepwise inclusive approach". The independent variable that explained the greatest amount of variance in the dependent variables entered into the equation first. "In other words the variable that explains the greatest amount of variance unexplained by the variables already in the equation enters the equation at each step".[1] The criteria established for selecting the variables were as follows:

1 that four variables should be selected. This is not unduly restrictive, as it must be borne in mind that there are only 16 observations.

2 that in addition, the log income per household and the square log income per household should also be selected.

3 that the four variables to be selected should meet the determined level of the "F ratio" statistic at the 10 per cent level of significance. (The stepwise procedure ensured that should more than four variables meet this criterion, those four with the highest F ratio would be selected.)

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1 Nie, Norman H., Hull, C. Hadlai, and Others, Statistical Package for the Social Sciences, Second Edition, McGraw Hill Book Company, New York, 1975, p. 345.

Thus, the stepwise regression approach introduced explanatory variables successively into the equation and thereby showed the effect of each change in the standard error of each variable and on the R^2. The effect of the successive additions of explanatory variables on the degrees of freedom was also considered since the number of cases was only 16 - i.e. the number of Iraqi governorates in 1971.

In judging whether a particular factor had a significant influence on income distribution, 't ratios' were calculated for the regression coefficients, and two-tailed tests were conducted to judge whether the coefficients were significantly different from zero.

C The Variables and the Statistical Data

C 1 The Dependent Variables

The income shares of different percentile groups of households, ranked according to their position on the income scale, were chosen as the dependent variables. These included, the income shares of the top 20 per cent, the middle 40 per cent, and the lowest 60 per cent, 40 per cent and 20 per cent of households for each of the areas investigated (rural and urban areas, and the country as a whole). In addition, one index of income inequality, the Gini ratio, was employed.

No firm conclusion on the "best" measure of inequality to be adopted in such an examination has yet been reached. Each measure of inequality emphasizes a different aspect of the distribution.[1] The

1 Adelman and Morris, op. cit., p. 149.

income shares of the different percentile groups of households have been used in most similar cross-country analyses.[1] These groups of households signify the different socio-economic groups which are of interest and which respond in a socially consistent but obviously non-uniform way to the economic, social and political policies of the central government and development planning bodies.

Although the Gini index provides a summary of the overall distribution in one figure, it is heavily influenced by the share of the upper income groups.[2]

C 2 The Independent Variables

The household income share is assumed to be determined by the returns from the possession of certain economic resources such as labour, capital and land. However, human capital embodied in education, sex and age, the structural changes in the economy and the social life of the society also play a part in determining household income.

Since the analysis covers both the urban and rural areas and the country as a whole, a separate examination of each area was required. These identified factors with a significant special relationship with each dependent variable. In an early stage of this analysis there were 24 possible economic-social and demographic factors. But those were reduced to 11 variables, since many were alternative measures of the same

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1 Specifically the Adelman and Morris,Ahluwalia studies referred to in the study.

2 Kuznets, S., "Quantitative Aspects ...", op. cit., p. 17.

basic factor.

This selection was achieved by producing correlation matrix coefficients for all the variables in the rural and urban areas and for the country as a whole, as shown in Appendix D, Tables (D.1, D.2 and D.3) respectively.

The criteria used in choosing the explanatory variables were first, those with the most significant correlation coefficients with the inequality measures, when there were several alternative measures of the same basic factor. Secondly, those most easily justified theoretically given the limited nature of our understanding of the size distribution of income. Lastly, those found significant in other empirical studies.

The explanatory variables finally chosen were as follows:

A Level of Development

1 Logarithm of Income per household (1971)

2 Square Logarithm of Income per household (1971)

3 Rate of Growth of GNP (1956-1971)

B Structure of Production

4 Share of Industry in GNP (1971)

5 Share of Agriculture in GNP (1971)

6 Share of Wages in Agriculture (1971)

C Demographic Characteristics

7 Population Growth Rate (1965-1970)

8 Share of Urban Population (1970)

D Education

9 Primary School Ratio (1971)

10 Urban Literacy Ratio (1965)

11 Secondary School Ratio (1971)

Appendix D, Table (D.4) shows the mean, standard deviation and the number of cases of both the dependent and the independent variables.

D The Statistical Results

The results will be presented and analysed according to the grouping of the explanatory variables as introduced in the preceding section.

These are examined under the following headings:

D 1 The Kuznets Hypothesis

D 2 Economic Structure and Growth Rates

D 3 Population Growth Rates

D 4 Education

Each section of these topics will cover all the results concerning the rural areas first, the urban areas second and finally the country as a whole.

The results of the cross-governorate analysis are shown in Tables (7.1, 7.2 and 7.3) for the rural areas, the urban areas and the country as a whole respectively.

TABLE (7.1)
Cross-section Regression Analysis of Rural Income Distribution, 1971

Dependent Variable / Income share of	Estimated Coefficients on Explanatory Variables (X)								
	Constant	Log income per household	[Log income per household]^2	Rate of Growth of GNP	Pop. Growth Rate	Primary School Ratio	Share of Wages in Agri.	Share of Urban Pop.	R^2
Top 20%	-9.908	7.505	-1.357	0.772	2.698***	-0.899			0.529
		(1.698)	(1.671)	(1.585)	(2.076)	(1.553)			
Middle 40%	5.403	-3.695	0.660	-0.690**	-2.058*	0.990*			0.640
		(1.516)	(1.473)	(2.566)	(2.870)	(3.096)			
Lowest 60%	17.416	-12.479**	2.284**	-1.227**			0.343***		0.538
		(2.613)	(2.597)	(2.596)			(1.783)		
Lowest 40%	8.933	-6.362***	1.157***	-0.573	-1.792***	0.442			0.556
		(1.958)	(1.937)	(1.598)	(1.875)	(1.037)			
Lowest 20%	7.363	-5.305*	0.967*	-0.241			0.110	-0.038	0.616
		(2.848)	(2.819)	(1.081)			(1.473)	(1.324)	
Gini Ratio	-16.147	12.007**	-2.181***	1.110***	3.439***	-0.997			0.607
		(2.226)	(2.199)	(1.866)	(2.167)	(1.409)			

(X)t - statistics in parentheses
* significant at 2 per cent level and less
** significant at 5 per cent level
*** significant at 10 per cent level

TABLE (7.2)
Cross-section Regression Analysis of Urban Income Distribution 1971

Dependent Variable / Income share of	Estimated Coefficients on Explanatory Variables (X)							
	Constant	Log income per household	[Log income per household]^2	Rate of Growth of GNP	Pop. Growth Rate	Share of Industry in GNP	Urban Literacy Ratio	R^2
Top 20%	21.857	-15.543**	2.810**	-0.753	-1.410***		0.318	0.579
		(2.271)	(2.261)	(1.731)	(1.950)		(1.399)	
Middle 40%	-15.493	11.504*	-2.086*	0.546**	0.823*		-0.219**	0.774
		(4.010)	(4.003)	(2.990)	(2.715)		(2.302)	
Lowest 60%	-10.092	7.513	-1.355	1.149*	1.354**	-0.236***		0.752
		(1.700)	(1.663)	(3.976)	(2.579)	(2.034)		
Lowest 40%	-3.266	2.431	-0.428	0.844*	0.558***	-0.184		0.681
		(0.749)	(0.715)	(3.982)	(2.165)	(1.446)		
Lowest 20%	2.336	-1.647	0.296	0.272***		-0.052	0.077	0.470
		(0.815)	(0.799)	(2.061)		(1.135)	(1.194)	
Gini Ratio	14.558	-10.137	1.811	-1.284*	-1.392***	0.242		0.659
		(1.655)	(1.603)	(3.209)	(1.912)	(1.500)		

(X)t - statistics in parentheses
* significant at 2 per cent level and less
** significant at 5 per cent level
***significant at 10 per cent level

TABLE (7.3)
Cross-section Regression Analysis of All Iraqi Income Distribution, 1971

Dependent Variable / Income share of	Estimated Coefficients on Explanatory Variables (X)							
	Constant	Log income per household	Log income per household	Share of Agri. in GNP	Rate Growth of GNP	Share of Urban Pop.	Secondary School Ratio	R^2
Top 20%	19.192	-13.456* (2.790)	2.436* (2.788)	-0.204* (4.009)	0.728** (2.401)	-0.239* (3.852)		0.649
Middle 40%	-5.294	4.033 (0.991)	-0.735 (0.999)	0.091*** (2.103)		0.167* (3.103)	-0.318*** (1.927)	0.514
Lowest 60%	-19.359	14.148* (3.336)	-2.560* (3.333)	0.201* (4.405)	-0.873* (3.275)	0.217* (3.973)		0.718
Lowest 40%	-4.731	3.630 (0.789)	-0.664 (0.793)				-0.267** (2.100)	0.359
Lowest 20%	2.606	-1.801 (0.885)	0.322 (0.869)				-0.112*** (1.991)	0.412
Gini Ratio	28.258	-20.024* (3.489)	3.616* (3.478)	-0.247* (4.087)	1.020* (2.829)	-0.254* (3.443)		0.679

(X)t - statistics in parentheses
* significant at 2 per cent level and less
** significant at 5 per cent level
*** significant at 10 per cent level

D 1 The Kuznets Hypothesis

This hypothesis refers to Kuznets findings that income inequality tends to have a U-shaped form in the course of the development process. It is suggested that equality decreases in the early stages of the development process but reaches a certain level after which it increases.

This was tested by considering the household income shares on the logarithm of income per household, the latter being taken as an indicator of the level of development. The quadratic form of this variable was introduced in the equations to explore any "significant nonlinearities in the relationship between the income shares and the level of economic development".[1]

The approach of this study is similar to that used by Ahluwalia and Adelman and Morris in their tests of this hypothesis. There are, however, certain differences in the unit of measurement which ought to be mentioned. These studies were faced with the absence of a unified set of statistical data for a cross-country approach for the developed and developing countries. They used variations in income shares but these were measured in a variety of units: in some cases by household, in some by individual and in others by specific groups of wage earners as well as other roughly estimated income shares. Some income shares were examined on a GNP and others on a GDP basis per capita. But here the item of "Net factor income from Abroad" can make a considerable difference in both developed countries and developing countries where there is significant foreign investment in extractive and other industries.

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1 Adelman and Morris, op. cit, p. 222.

The solution to this problem would be a consideration of personal income rather than GNP or GDP per capita, since this would be comparable to the income shares that emerge from surveys of the population that cover the size distribution of income. These data problems are of considerable significance in comparative studies since they impose strict limitations on comparative analysis and any conclusions that might be used for policy formation.

D 1 1 The Rural Areas

The results of the rural areas tend to support the Kuznets hypothesis. Lower income groups exhibited a U-shaped form of relationship. For the income share of the top 20 per cent and the Gini ratio, the U-shape is in an inverted form, as higher values of these variables are associated with lower equality. The relationship was found to be significant between the 10 per cent and 1 per cent levels in the case of the income shares of all the lowest income groups.

However, this relationship does not appear to be significant for the income share of the top 20 per cent; and middle 40 per cent, and is significant at 5 per cent for the Gini ratio.

The cross-governorate results for the rural areas of Iraq give support to the Kuznets hypothesis. The existing U-shaped pattern of income inequality indicates that the share in income of the lowest household income groups decline as average per household income increases with the development process.

These findings are in line with those of Ahluwalia's restricted

sample of 40 developing countries and with those of Adelman and Morris and Chenery and Syrquin.[1]

D 1 2 The Urban Areas

In general the results for the urban areas do not support the Kuznets hypothesis. The only exception is the income share of the lowest 20 per cent. Although the coefficients had the hypothesised signs, they were not significant. As to the share of other income groups, the coefficients on the log income were not significant[2], except for the income share of the middle 40 per cent, where we found a highly significant relationship with a positive sign. This result for the middle income group in the urban areas is of interest since it suggests that those in the middle class benefit most from the development process.

Generally, in the urban areas, the location of governmental administration, the concentration of major economic activities and the higher accessibility of education and health services and other facilities favour the middle income group. It is probable that one effect of industrialization at its early stages is to increase the demand for the kind of specialized labour that this group can supply. It is the technicians, the skilled, semi-skilled and administrative personnel in government bodies and other branches of the economy that form the middle group that is gaining at the expense of other groups.[3]

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1 Chenery, H. and Syrquin M., Pattern of Development, Oxford University Press, London, 1975.

2 The coefficient of the top 20 per cent is significant at 5 per centlevel.

3 See Koichi Mera, Income Distribution and Regional Development, University of Tokyo Press, Tokyo, 1975, p. 7.

In 1971 a major part of those in the middle were engaged in governmental administrative bodies (including the armed forces, especially the officers) and showed a high increase in their incomes.[1] It is also clear that this group influences government policy in its favour in terms of indirect benefit to its standard of living. This was demonstrated by legislation for lower taxation, exemption from customs duties, free and subsidised land for house building purposes and reduction in transport fares, etc. These reinforce the direct effects observed. Furthermore, the 1964 nationalization of major industries, the increasing role of the government in trade, especially in foreign trade, and the agrarian reform (affecting absentee landlords residing in urban areas) discriminated against those in the top income groups, and benefited those in the middle.

D 1 3 The Whole Country

The results for the country as a whole show a similar pattern to those found in the urban areas. This seems to be caused by the higher weight of both urban distribution and urban per capita household income on the overall combined distribution. As mentioned above, the urban areas accounted for 60 per cent of total personal income estimated in 1971.

In all the equations, the coefficients show no consistency with the Kuznets hypothesis, i.e. the inverse U-shaped form of curve resulted. The relationship was statistically significant in most of the equations,

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1 See Chapter II, Section (D.2).

except for the income shares of the middle 40 per cent, lowest 40 per cent and lowest 20 per cent.

Kuznets' explanation of the first period in the U-shaped relationship (i.e. while the curve is falling) between income distribution and economic development was in terms of 1) the social and economic changes attendant on growth making possible a rapid accumulation by the top income groups and 2) enhanced saving and investment behaviour by this group as a result of income disparity, reinforcing the tendency to inequality. In Iraq, however, the saving behaviour of no one section of the population can be considered crucial since by far the greatest share of capital formation is as a result of government investment financed by oil revenue. This reached 84 per cent of total capital formation in 1974, from only 54 per cent in 1971.[1] In the urban areas of Iraq there has been growing government control over the major economic sectors encouraged by oil revenue-financed public sector investment (which is dominant in both relative and absolute terms in total investment). The effects of this continuing tendency were enhanced by the once and for all effects of the nationalizations of 1964 and the new land reform of 1970.

Kuznets in his long-term analysis, using time series data, could not say more of his hypothesis than it "can be only dimly discerned and the results must be considered preliminary informed guesses".[2]

Kuznets' evidence was taken from data for three developed market

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1 Central Statistical Organization, Annual Abstract ... 1975, and ... 1976, op. cit., p. 166 and p. 184 respectively.

2 Kuznets, op. cit., Economic Growth ..., p. 260.

economies (England, Germany and the United States) during their formative years. Subsequent cross-sectional studies using data from developed and developing economies made no distinction between economies with a functioning capital market and a significant level of private domestic investment on the one hand and those in which investment was overwhelmingly a government activity financed by "windfall" foreign exchange earnings. In terms of the income distribution effects of development an economy such as the latter would seem to have more in common with a socialist economy financing investment via 'forced' saving. Under such circumstances the increasing urban-rural differential might reasonably be expected to be outweighed by the equalizing effects of centrally financed investment in the urban areas. The average cash income of an urban household is 1.5 times that of a rural household, and 1.2 times higher for the adjusted income in urban over rural incomes. The average income of the top 50 per cent of urban households is 3.1 times that of the bottom 50 per cent; the rural ratio is only 2.7 : 1.[1]

In conclusion it must first be remembered that the Iraqi cross-section data covers a much smaller range of income per head than the international cross-section studies, and that this may limit our ability to perceive the Kuznets phenomenon.

However, the results suggest that the short-term effect of development in Iraq that emerges from this study is that the major beneficiaries are the middle and lower income groups in the urban areas and this pattern is exhibited for the country as a whole, despite the

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1 See p. 156.

Kuznets effect in the rural areas where the top income groups benefit.

D 2 Economic Structure and Growth Rates

The regional accounts estimates for 1971 provide the percentage share of agriculture and industry in GNP (of the commodity producing sector of each governorate). This excludes the profit share of both the oil companies and the government from the oil sector, but includes the wage bill. 'Industry' refers to manufacturing and does not include the oil industry.

The relationship between industrialization and urbanization (defined in terms of the share of urban population in total population) is very close. They appear as complementary phenomena in the process of development, at the expense of the share of the agricultural sector.

The shift to urban centres of the rural population released from agriculture entails the maintenance and even expansion of agricultural output and therefore implies a rise in productivity. In certain cases, however, the increase in the urban population creates an excess labour supply beyond that required to match the growing demand for labour in the industrial, construction, and service sectors.

In the course of this study, we found that there is a concentration of most large and small scale industries in certain established urban centres and that incomes are distributed more unequally in urban areas in comparison to rural areas.

Care was taken to examine the degree of association of these

variables with other explanatory variables to avoid the multi collinearity problem.

The growth rate of GNP during 1956-1971 is important for any test of the hypothesis of an inverse relationship between relative equality and the pace of development. The production structure in the governorates and their performance should be kept in mind, since some of the governorates with highly traditional, agricultural sectors remained semi-stagnant during the period.

D 2 1 The Rural Areas

The share of urban population was the only structural, explanatory variable which was included in this stepwise regression. It entered in only one equation, the income share of the lowest 20 per cent.

The results suggest that the percentage share of urban population is negatively related to the income share of the lowest 20 per cent, but the relationship is only significant at the 20 per cent level.

In the preliminary tests the only change in the explanatory variables was with respect to the primary school ratio. Here the share of urban population entered two other equations, i.e. that with the top 20 per cent and that with the Gini ratio as the dependent variables. Though the coefficients were not significant, they still had the expected positive sign.

An explanation for such results might be found in the age structure of rural-urban migration as most migrants are of working age. As a large proportion of the most productive members of the rural labour force

depart for the cities, productivity declines together with the income share of the lowest 20 per cent.

At the same time, however, a larger urban population will increase the demand for agricultural products moving the urban/rural terms of trade in favour of agriculture. Those benefiting most from this process are in the top income group.

Such explanations can be seen as distinct from arguments about the dualistic nature of development which emphasize the access to productive employment opportunities and the decrease in population pressure in the rural areas.[1] One may conclude, under this alternative view, that there is no necessary reason why such a process should not turn in favour of the lower income group over time. This is, in fact, what might be expected from the aggregate results for the country as a whole.

The analysis of the rural areas includes the share of wages in agriculture in addition to other explanatory variables. The share of wages in agriculture is found to have a positive association only with the income shares of lower groups. But the coefficients were not significant for the lowest 20 per cent. It was nearly significant (at the 10 per cent level) in the case of the income share of lowest 60 per cent. In the rural areas, most wage earners are in the lowest income groups, so a higher wage share would have a positive impact on relative equality.

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1 Ahluwalia, op. cit., (C) p. 320.

The coefficient of the growth rate of GNP was highly significant only on the income shares of the lowest 60 per cent and middle 40 per cent. It was negatively related to these groups while it was positively related to the Gini ratio. (The coefficient of this variable is significant at the 10 per cent level.) This result suggests that higher rates of growth in the economy are inversely associated with relative equality.

D 2 2 The Urban Areas

The share of industry in GNP was the variable selected to explain the production structure in the urban areas. The share of industry refers to manufacturing and it excludes the oil sector.

The results show a significant but negative relationship between the share of industry and the income share of lowest 60 per cent. This suggests that a higher share of income generated in industry will be associated with a more unequal distribution.

These results contradict the argument that a positive relationship might be found between the share of industry and relative equality due to the higher wages that might be expected as a result of an increasing demand for labour. This is true if there is high rate of unemployment in the urban areas. The flow of unskilled labour from the rural areas would bring down the average income of lower income groups in the urban area.

As mentioned earlier, the urban areas were characterized by a

higher concentration of manufacturing industries of both small and large scale.[1] Manufacturing is concentrated in a small number of urban centres and such a situation "will lead to a higher income disparity, especially between the urban incomes and the rural incomes".[2] Furthermore, it was pointed out by Adelman and Morris that the nature of industrialization policies in the developing countries tend to skew the income distribution by raising the share of profit in national product higher than it would have been under free market conditions.[3]

The industrial private sector despite its setback in the 1964 nationalization, is still active, though limited to small and medium scale consumer industries and other mixed establishments (in joint ownership with the government). In 1974, the private sector in industry produced more than half the total value added in industry[4], if the private sector's share in all mixed industries are considered.

Iraqi trade policy was oriented towards the protection of domestic industry, exemption of industrial raw material and capital goods imports from customs duties and incentives for the export of industrial products.

D 2 3 The Whole Country

The share of agriculture in GNP, the share of urban population and the growth rate of GNP are explanatory variables entering the

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1 See Chapter III, section C.

2 Mouteulee, H., Economics of Iraq, (Arabic version) Edited by the Centre of Economic Studies, Damascus, 1964, p. 62.

3 Adelman and Morris, op. cit., p. 78.

4 Central Statistical Organization, Annual ... 1976, op. cit., p. 180.

equations for the country as a whole.

Both the share of agriculture in GNP and the share of urban population were found to have significant negative coefficients in relation to the income share of the top 20 per cent and the Gini ratio, and a significant positive correlation with the income shares of the middle 40 per cent and lowest 60 per cent. They may be understood, therefore, to be associated with greater equality.

The previous evidence shows that agriculture in Iraq represents a declining proportion of GNP and this would suggest a tendency to greater inequality for the country as a whole. Urbanization, however, is also proceeding at a high rate and therefore constitutes a countervailing influence.

One possible mechanism through which these factors may influence inequality is through changes in the terms of trade between agriculture and industry. An increasing urban demand will improve the agricultural terms of trade. The benefits from such change would accrue chiefly to the top income group in the rural areas (e.g. the landlord class, of the years preceding land reform, who had the choice of the best land guaranteed by law as part of the reform law and who enjoy a larger area of cultivable land per family than other groups). Furthermore, the decline in agricultural productivity will have resulted in lower agricultural incomes whose burden would be felt mainly by the owners of small and medium sized holdings who constitute the low and middle income groups.

The effect of urbanization in making distribution more equal is

explicable by reference to the increasing role of government in the modern sector and the measures taken to limit private participation in manufacturing and trade. The impact of such measures fell chiefly on those in the top income group, while benefiting small-scale industrialists and traders, and those employed in the growing government agencies and administrative bodies.

The effect of GNP growth on distribution is the reverse of that found for urbanization and the share of agriculture in GNP. The growth rate was significantly and positively correlated with the income share of the top 20 per cent and the Gini ratio. It was significantly and negatively associated with the share of the lowest 60 per cent. Thus, the findings of this study coincide with those of others in which the structural changes in the economy associated with development appear to result in growing inequality.

D 3 Population Growth Rates

A high population growth rate by lowering the marginal productivity of labour, had a significant and substantial negative effect on the growth of income per head. There is still no clear evidence, however, of the exact nature of its relationship to the income levels and shares of different income groups.

The rate of growth of population varies between income groups and the assumption that lower income groups have more persons per household[1]

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1 Adelman and Morris, op. cit., p. 105.

has not been supported in either this or other studies of developing countries.[1]

From the 1971 results for the size distribution of income by individuals in Iraq, it was found that the average size of household for the lowest income groups ranged between 4.2 and 5.8 persons, while the average size of household in the top income groups was between 8.9 and 9.1 persons.

The population growth rate considered in this section is the growth of total population of the 16 governorates between 1957 and 1970. (See Table (2.2).) The large differences in growth rates observed between governorates during this period can be explained by migration, the level and quality of public health services and differences in the rate of natural increase.

This section only deals with results for the rural and urban areas, since the growth of population was not significant in the equations for the country as a whole.

D 3 1 The Rural Areas

The results reveal that the growth rate of population coefficients had a significant positive correlation with the income share of top 20 per cent and Gini ratio, and a significant negative correlation with the income share of the middle 40 per cent and lowest 40 per cent.

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1 Ahluwalia, (C) op. cit., p. 326.

This suggests that a faster population growth rate is associated with greater inequality.

The average number of persons per rural household in the top 20 per cent of households was 9.3 persons, while it was only 4.8 persons in the lowest 20 per cent of households. This indicates that the rural rich had more children and their families are growing faster than those of the lower income groups.

The association of higher population growth rates with greater inequality can perhaps be explained in terms of an increase in the supply of labour which would lead to lower real incomes in the lower and middle income groups.

The limited availability of good land (the major productive resource of the middle and lower 40 per cent) leads to lower productivity per head as population pressure depresses the land/labour ratio.

D 3 2 The Urban Areas

The results for the urban areas show that the population growth rate is positively correlated with the income shares of the middle 40 per cent and the lowest 60 per cent and 40 per cent (significant at the 10 per cent level). The income share of the top 20 per cent and Gini ratio were negatively related to population growth (significant at the 10 per cent level).

Average family size in the highest income group was 8.8 persons, and in the lowest income group was 5.3 persons. Average urban family

size is 5.4 per cent lower than that of the rural areas for the top 20 per cent and is higher by 9.4 per cent for the bottom income group.

The significant positive association between population growth and the income shares of the middle 40 per cent and lowest 60 per cent of households in urban areas could be explained by the growth of urban GNP. This was significant during the period and certainly resulted in expanding employment opportunities in urban areas that would mainly benefit these groups. Employment in the governmental bodies rose from 279,433 persons in 1964 to 385,978 in 1972, an increase of nearly 27 per cent over this period.[1]

D 4 Education

In many statistical studies, education has been found to be one of the main explanatory variables that has a significant relationship to earnings.[2] It is a general indication of the role of human capital (the education, training and skill level of the labour force) in determining the pattern of income distribution and growth.[3]

Given the relationship between the various factors of production and conditions within the market for any one factor, skilled labour will maintain a wage differential over unskilled labour and as the proportion

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1 Central Statistical Organization, Statistical ..., op. cit., p. 250, and Annual ... 1973, op. cit., p. 400.

2 Psacharopoulos, G., "Jencks and Inequality" in Comparative Education Review, Vol. 18 (1974), pp. 430-450.

3 Ritzen, J.M.M., Education, Economic Growth and Income Distribution, North-Holland Publishing Company, Amsterdam, 1977, p. 6.

of skilled workers increases, labour productivity in the industrial sector and hence the share of wages in the overall income distribution will also increase.

To test these relationships, it is necessary to have accurate data on the skill levels in the economy as a whole and on the stock of physical capital. Such data is only available for the industrial sector, however, and the share of this sector in GNP and total employment is very low in most Iraqi governorates.

The alternative used in this study was estimated indicators for rural and urban areas and for the country as a whole. The variables chosen were:

a) In the rural areas: the proportion of the population 5 to 10 years of age enrolled in primary schools. This ranged between 12.5 per cent in Anbar governorate to 24 per cent in Baghdad governorate in 1971.

b) The urban literacy rate was the variable used in the urban areas. This was calculated for the male population with different levels of education and those able to read and write reported in the 1965 population census. The literacy rate was an average 2.7 times higher in urban areas than in rural areas. The urban literacy rate was lowest in Dhok governorate (24.7 per cent) and highest in Baghdad governorate (44.8 per cent).

c) The secondary school participation rate was the variable in the case of the country as a whole. This variable refers to the proportion of the 11 - 19 years population in 1971, that in secondary and intermediate schools.

D 4 1 The Rural Areas

A highly significant positive relationship was found between the income share of the middle 40 per cent and the primary education variable. The income share of the top 20 per cent and the Gini ratio were negatively correlated with primary education.

These results suggest that a higher primary school ratio in the rural areas is associated with higher income share for the middle and lowest income groups. These groups consist chiefly of small and middle sized agricultural land holders who have either traditionally been landowners or who benefited from the land reform.

Closely associated with the agrarian reform programme was the campaign to eliminate illiteracy and the expansion of elementary education. These developments were of considerable importance to small farmers and peasants, many aspects of whose lives have been transformed by the ability to read and write.

Principally, education has provided an understanding of rights and interests (the availability and use of credit, the benefits and responsibilities of agricultural cooperatives, etc.). It has also made possible a wider application of modern methods and organisation and thus a more efficient use of resources, especially land. The use of improved seeds and fertilizers will ensure an increase in the efficiency and productivity of the agricultural sector. The tendency for these improvements to increase the relative standard of living of the lowest groups will tend to increase their income share.

D 4 2 The Urban Areas

The urban literacy rate was found to be negatively related to the income share of the middle 40 per cent. It was positively related to the income share of the top and lowest 20 per cent, but the coefficients were not significant.

The negative effect of literacy on the middle 40 per cent could be explained by the number of educated people rising into this group from the lowest group as a result of the literacy campaign and free urban education. The resulting increase in labour market competition might be expected to bid down real income in this group.

It is likely that the top income group benefits from higher educational levels in the urban areas, while the bottom group can find employment opportunities expanding in government offices for those with a secondary education.

D 4 3 The Whole Country

The third explanatory variable, the secondary school rate, entered three equations. The results showed a significant negative relationship with the income share of the middle 40 per cent, lowest 40 per cent and lowest 20 per cent.

There is, however, one possible explanation. From the evidence in section (E.1.2)of Chapter III on educational distribution by region, it was shown that most secondary schools are located in urban areas. Thus secondary education increases urban incomes, but as these are higher than rural incomes this increases overall inequality.

The type of education provided in different regions is determined by development needs and this may also increase inequality: higher and secondary education are concentrated in the urban areas while primary and technical (agricultural) education are more relevant for rural needs, this will chiefly benefit upper income groups, and middle income groups to some extent.

The evidence also shows that there is a shortage of technical and vocational schools in the country as a whole. This again will hamper the majority of those in lower income groups.

E Evaluation and Summary

The multiple regression approach that was used in conjunction with the stepwise method in this study would seem to have produced satisfactory results. Each of the 18 equations contained between three and five explanatory variables in addition to a constant term. These were drawn from a set of nine possible variables in each of the three areas investigated.

The R^2s indicate that the selected explanatory variables, operating jointly, explain 1) from 53 per cent to 64 per cent of the variance in the rural areas' income inequality, 2) from 47 per cent to 77 per cent of the variance in income inequality in urban areas, 3) from 36 per cent to 72 per cent of the variance in the income shares in the country as a whole.

The results can be taken as providing tentative explanations that require further investigation. Both the analytical approach and the quality of the data used impose limitations on the strength of the conclusions that may be drawn: they might best be considered as insights into the pattern of income distribution. We have done no more than to provide, in the words of Ahluwalia "some clues to the mechanisms through which the development process affects the degree of inequality".[1]

The statistical result can be summarized as follows:

a) In the rural areas the results provide support for Kuznets' hypothesis that relative inequality increases with higher per household income but only in the early stages of development: it follows a U-shaped pattern. In the case of urban areas, the inverse of the Kuznets 'U' hypothesis seems to be supported by the data. On the whole, for all Iraq, the urban pattern appears to outweigh the rural, showing an inverse U-shape.

b) The production structure expressed by both shares of industry and agriculture in GNP suggest: a greater relative inequality in those urban areas that have a higher industrial share. The overall results for the country indicate a positive correlation between income inequality and a decline in the agricultural share.

Urbanization is associated with greater inequality in rural areas, but benefits the middle and lower income groups in the country as a whole.

c) Any correlations between the growth rate of GNP and inequality must be considered in the light of the different levels of development and the different types of growth experienced in the 16 governorates.

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1 Ahluwalia, op. cit., (C) p. 338.

In rural areas the results provide support for the hypothesis that faster growth is associated with greater inequality. A similar association was found for the country as a whole. This was not the case in urban areas, where higher income shares for the lowest and middle income groups were shown to be associated with a faster growth rate.

d) Higher rates of population growth in rural areas were associated with greater income inequality. In urban areas, on the other hand, the results indicated a lessening of relative inequality.

e) The type of education provided in rural and urban areas is related to the perceived needs of those areas. Education in rural areas is chiefly primary and the literacy campaign is concentrated here. Secondary education is concentrated in urban areas. Both the literacy campaign and the primary school enrolment rate in the rural areas and the literacy rate in urban areas are positively correlated with greater equality in rural and urban areas respectively. Greater access to secondary education, on the other hand, appears to be associated with more inequality.

CHAPTER VIII

Summary and Conclusions

The purpose of this study has been to present and analyse the estimates of the 1971 size distribution of income at both a national and a regional level.

Chapter I introduced the study, explaining that despite a long-standing concern over and interest in income distribution in Iraq, no empirical evidence of trends were available. The need for some measure of the degree of income inequality intensified after the 1958 revolution and the subsequent priority accorded to questions of economic and social equity.

The introduction also points out that the traditional argument of the need for more income inequality in the early stages of development may not be relevant for an oil rich economy and may be questionable in general.

Chapter II surveyed the economic condition of Iraq during the period 1964-1971. The population of Iraq, with its 3.2 per cent rate of growth, is highly concentrated in the Central region. This region has slightly less than half of the total population and the highest population growth rate. Clearly such a high rate as can be found in governorates such as Baghdad (5 per cent) and Kerbela (4.2 per cent) includes immigrants from rural areas as well as the natural increase.

A decrease in the proportion of the population in rural areas was observed. It fell from 61 per cent in 1957 to 43 per cent in 1970.

Agricultural employment accounted for half of the total employed, and increased at a faster rate than employment in other sectors.

The manufacturing and electricity industries employed slightly more than 7 per cent of the total and, since these are mostly located in urban areas, they absorbed labour at a relatively higher rate than the growth of the urban population. Total employment in commodity producing sectors grew faster than the labour force and this suggests that this sector absorbed more of the new entrants to the labour force than did the services sector.

In 1971, the distribution of employed workers in the commodity sector by governorate indicated that more than one third of the labour employed was concentrated in three governorates: Baghdad, Nineveh and Thi-Qar. The Central region accounted for nearly two fifths of total employment, followed by the Northern region with a third of the total.

In the non-agricultural sectors, the regional distribution of employment is highly skewed. Baghdad, alone, accounts for over 50 per cent of employment in manufacturing, electricity and construction.

The agricultural sector accounted for nearly 80 per cent of the total employment in the commodity sector. Five governorates out of 16 (Nineveh, Thi-Qar, Baghdad, Babylon and Sulaimaniya) accounted for more than 50 per cent of agricultural employment. Only a small proportion (about 13 per cent) of this sector's employment was wage labour.

Economic performance was moderate in terms of the growth of GNP,

reaching 5.7 per cent during the 1964-1971 period while the per capita income grew by 2.6 per cent.

Though Iraq remains an agrarian economy in terms of employment, it is dominated by the oil exporting sector. The latter constituted nearly 36 per cent of GNP in 1971, financing nearly 80 per cent and 90 per cent of the total ordinary and development budgets respectively. The dependence of the country on foreign trade is also clear since it was the oil export sector that helped to maintain the external balance.

The experience of a quarter of a century of planning produce little. The very ambitious objectives were undermined by inadequacies in plan implementation, the absence of coordination between fiscal, monetary and trade policies, the lack of efficient organization and management, the shortage of technical and skilled labour, and many other factors. Any significant improvement in the method of allocating the country's resources would boost the development effort.

The importance of the public sector is evident from the increase in its contribution to GNP over the period. Its growth was much higher than that of the private sector. In 1972, it produced slightly less than two fifths of GNP. Public investment constituted more than one half of gross capital formation in the same year. The public sector seems to have consolidated its position in most areas of economic activity. This was especially true in 1961 when most of the IPC concession areas were expropriated. The 1964 nationalization of the largest industrial establishments and banks and the 1972 nationalization of IPC continued the process.

In terms of income distribution, however, the share of wages declined to one third of national income. The average real wage per worker in the manufacturing, oil and government sectors grew at a slower rate than the rate of growth of per capita income. This suggests that the moderate growth performance of the economy was not fully reflected in the standard of living of employees and was of no benefit to pensioners whose position worsened.

The location of most industrial establishments and government bodies in the urban areas, the declining share of wages and the inter-group wage differentials, are all indications of a highly unequal distribution of income.

From Chapter III, which presents the 1971 geographical distribution of economic and social activities, one can conclude that there are considerable income disparities between the governorates of Iraq. The Central region's per capita income is higher than that of the Northern and Southern regions by one third. Productivity in the Central region is also higher by 2.3 and 2.5 times that of productivity in the Northern and Southern regions respectively. Three governorates: Thi-Qar in the South, Arbil in the North and Anbar in the Central region have lowest levels of both per capita income and productivity.

Agricultural productivity is much below the average of all the non-agricultural sectors. The variation in productivity between industry and agriculture is greatest in the Southern region and least in the Northern region. The 1956-1971 regional growth rates varied widely. The Central region enjoyed the highest rate of growth of income in both the agricultural and industrial sectors.

Considerable disparities in the degree of industrial concentration and in the share of the regions and governorates in GDP characterized Iraqi industrial development during the 60's and up to the present. The bulk of the country's industrial output and employment (52 per cent of all small scale establishments and 78 per cent of all large scale establishments) were concentrated in the three governorates where the infrastructure and services necessary for rapid industrialization had been made available. These were Nineveh in the North, Baghdad in the Central region and Basrah in the South. These are also the most densely populated areas of the country. They are linked to each other by rail, road and air and have easy communication with the rest of the country. They are, moreover, provided with electricity plants, oil and gas, water and other raw materials, inputs which are either useful or essential to large scale manufacturing establishments.

The distribution of agricultural activity exhibits a similar regional concentration. The value added in the Central region accounted for 41.3 per cent of GDP of which 21 per cent was created in Baghdad governorate. The Northern region also had a higher proportion, especially in the Nineveh governorate. Certain governorates such as Dhok and Arbil in the North, Anbar in Central region and Muthanna and Thi-Qar in the South were distinguished by their low level of agricultural output.

The distribution of agricultural land (including state land holdings) showed that between 1958 and 1971 no radical change in land distribution has been achieved. In 1958 the top one per cent of land owners possessed more than 55 per cent of agricultural land, while in 1971 this share was 22.1 per cent. The Gini ratio of concentration

indicated a slight decline from 0.8814 in 1958 to 0.6175 in 1971.

The total arable land in the country as a whole has declined from 32.2 to 22.5 million Meshara during this period. The Southern region suffered most. This was due mainly to the salt damage caused by the inadequate drainage system. On the other hand the number of agricultural holdings increased markedly as a result of agrarian reform. The Central region witnessed the greatest increase.

The land tenure system reveals that the Central region has the highest percentage of owned land. Of the total rented land in this region, three quarters is rented from the agrarian reform authorities. In the Southern region two fifths of total holdings are owned. The Northern region has a higher proportion of rented land and more than half of it is rented from land-lords.

On the regional distribution of education, the study found a clear inequality in educational opportunities at all educational levels. The numbers of primary and secondary school pupils, vocational and university students, all grew faster in the Central region than elsewhere during the 1960 to 1971 period. School enrolment as a proportion of primary and secondary age groups showed an even greater disparity between regions. In both cases the Central region had the highest proportion.

On health services, the ratio of doctors per 100,000 inhabitants was highest for the Central region. Nearly 68 per cent of all doctors in Iraq are working in this region. Of this percentage more than 52 per cent were doctors located in Baghdad governorate alone.

The imbalance in the distribution of doctors is a demonstration of two factors: there was an insufficient number of doctors, and secondly there was no official policy of distributing doctors according to the demand of various regions. While the inequalities in medical provision are fairly high between regions, the inequalities between rural and urban areas within each region are even higher. The regional distribution of hospitals,public clinics and health centres as well as private pharmacies does not differ much from the distribution pattern of doctors.

Chapter IV provides estimates of size distribution of income from the surveys of 1954, 1961 and 1968. Their coverage was limited to Baghdad and its environs.

The 1954 results show that the built-up areas' average income per household was nearly double that of the Serifa camps. In both areas the top half of households received income shares 2.4 times higher than those of the poorest half. The evidence suggests that incomes are distributed less unequally in the Serifa camps than in the built-up areas: the Gini ratio of concentration was 0.3008 for the latter and 0.2794 for the former.

The 1961 survey, showed an even higher differential in average income between these areas. The built-up area's average income per household was nearly 4 times higher than that of the Serifa camps. The size distribution of expenditure in the built-up areas (used due to the absence of detailed data on income) showed that the lowest 20 per cent of household had an expenditure share of 9 per cent while that of the top 20 per cent was 4.4 times higher. The lowest 50 per cent

of households received nearly 30 per cent of total expenditure which was similar to their share in 1954. The Gini ratio was estimated at 0.2965 which is slightly less than that of 1954.

The result of the income survey of 1968 suggested higher degree of income inequality. The lowest 20 per cent of households received an income share of about 2 per cent while the share of the top 20 per cent was 52.7 per cent. The Gini ratio (0.4934) was even higher than the ratios of the previous two surveys. This may have resulted from an unsatisfactory sampling method and coverage.

Four categories of educational level were distinguished in the 1968 survey, which indicated a higher income differential between those with the highest qualifications and the illiterates and semi-literates.

What emerges from these results is that between 1954 and 1961 there may have been a very slight decrease in inequality, but in 1968 inequality seems to have increased sharply. The Gini ratio estimated for 1968 was higher than that for both cash and adjusted incomes in urban Baghdad in 1971. This suggests that with development there was a relative increase in the number of incomes created at the top end of the scale. This certainly appears to be the case in the urban areas where there is a concentration of economic activity.

The main results of the study are presented in Chapter V. Here the data for 1971 consists of incomes for the months of June and December for 1600 households in the urban areas and 1,000 households in the rural areas. The concept of annual income used in processing the data for each household involved scaling up by six both of the

monthly incomes. Since the sampling fraction differs in the urban areas from that in the rural areas it was necessary to weight the findings from both areas to ensure a correct representation when extracting combined aggregates for the country as a whole.

In the reconciliation of the personal income estimates of this study with those of National Accounts, it was found that the differences ranged between one and six per cent. The above official estimates stood at ID. 763.7 million, while this study estimated the personal income - after specific adjustments - at ID. 772.5 million.

From the distribution of income by household it was found first, that there was a greater income differential between those in the top and bottom income groups when considering adjusted income. The difference in the average income between these two groups was in ratio of 25 : 1.

The top 10 per cent of households had cash incomes about 13.7 times higher than the lowest 10 per cent of households. The difference was 9.9 times in adjusted income. Nevertheless, the top 50 per cent of households got 77.1 per cent of total cash income and 74.4 per cent of total adjusted income. The Gini ratio was found to be 0.4035 for cash income and 0.3615 for adjusted income. This means that higher inequality prevailed when considering cash incomes.

The distribution of income by individual indicated less disparity between the lower and top income groups than is the case for household distribution. As the average per capita adjusted income for the entire population was ID. 80.7, 60 per cent of the population had

incomes lower than this average.

Comparing the overall household and individual distributions, the result suggested that the distribution by individual is more equal. The lowest 10 per cent of individuals received - both in cash and adjusted incomes - nearly double that received by the lowest 10 per cent of households. The Gini ratio was 0.3188 for cash income and 0.2645 for the adjusted income. This greater equality of distribution by individual results from the variation in the size of household with income level. The average size of household in the top income group was 9.1 persons which is nearly double that of the lowest income group.

The occupational structure showed that administrators and professionals accounted for nearly 4.1 per cent of total employed, while their total annual income was 7.8 per cent of total income. The average adjusted income for production process workers was lower than that of farmers. The inverse is the case when cash incomes are considered. More than half of these two occupations were to be found in the middle income group which had an annual average adjusted income of nearly ID. 500.

From the distribution of income by work status, we conclude that the self-employed were dominant in the total employed in the agricultural sector. The number of wage earners was very small. In the non-agricultural sectors wage earners were dominant, where they accounted for nearly two thirds of total employed in non-agricultural sectors. Their share was about 60 per cent of total sectoral income. The overall proportion of employees (in both agricultural and non-agricultural sectors) was 42.8 per cent and they received a wages share

slightly less than their proportion. Non-agricultural employees had an average income 18 per cent higher than those in the agricultural sector.

The distribution of income by urban and rural areas showed an obvious difference in average incomes. The average adjusted income of an urban household is 20 per cent higher than that of a rural household. The average income of the top 50 per cent of urban households is 3.1 times that of the bottom 50 per cent; the rural ratio is only 2.7 : 1. Thus, even though the bottom 50 per cent of urban households get 24.6 per cent of urban income, whereas the bottom 50 per cent of rural households got 26.7 per cent, the former are on average better off than the latter. This is an indication of considerable inequality between the two areas. The Gini ratio for urban areas was 0.3683 and for rural areas was 0.3417; this means that incomes are distributed more equally in the rural areas.

The urban and rural occupational structure revealed that in the urban areas, one half of the workers in the services and production sectors and farmers earned incomes below the urban average income. Only 22 per cent of workers in the rural areas earned below the rural average and those are mainly in non-farming occupations. The survey revealed no administrative and managerial workers in the rural areas, and only a low number of technicians.

There is evidence that the urban area's average numbers of both working days and working hours are higher than those in the rural areas. In both areas, farmers have the smallest number of working days per month, while farmers in urban areas work more hours per day than those

in rural areas. This is, perhaps, one explanation for lower agricultural productivity and incomes. It may also go some way to explain the lower income levels in rural areas and the effect of this on overall inequality.

Chapter VI reveals that there are slight differences in the size of households between regions, but that there are wide differences between regions in terms of per household and per capita incomes. The Central region's average income is 32 per cent higher than that of the Northern region and 28 per cent higher than that of the Southern region.

The results indicate about the same degree of inequality in the Northern and Southern regions and more inequality in the Central region: the lowest quintiles of Northern and Southern regions were found to have received nearly similar shares (about 7.5 per cent) while that of the Central region received a lower share. The top quintile of households received 43.5 per cent of total income in the Central region and in the Northern and Southern regions received somewhat lower shares, 42.0 and 42.4 per cent respectively.

The regional distribution of income, either by household or by individual, suggests that there is less inequality in the Northern and Southern regions and that these two regions have similar patterns of distribution. In the Central region there is more inequality.

Three other measures of income inequality have been estimated: the Gini ratio of concentration, the standard deviation of logarithms of income and the Williamson indices. From the results of all three it is apparent that the Central region had the greatest income

inequality. This is the region in which the modern sector is concentrated, where a relatively higher productivity prevails and which has experienced a higher rate of growth.

The results produced by the various measures differ as to whether the Northern or Southern region had the lesser degree of disparity in incomes. The Southern region showed less inequality when the measures were applied to per capita income. There are features common to both these regions: a relatively high proportion of rural agricultural activity; traditional, unmechanised methods of production; relatively little managerial skill. These factors could well lie behind their moderate income inequality.

In considering the regional disparities in income distribution by urban-rural areas the results show that

a) There are higher per household and per capita incomes in urban areas for both cash and adjusted incomes. The greatest disparity between urban and rural areas is in the Southern region where the difference in per household income was 16.4 per cent. This figure was only 10 per cent and 6 per cent in the Central and Northern regions respectively. Per household and per capita incomes for both urban and rural areas are greatest in the Central region.

b) When measured by the share of adjusted income received by the lowest 20 per cent and 50 per cent of households, intra-regional equality was found to be greater in the rural areas of the Southern and Northern regions. In the Central region, by contrast, the share of these groups was slightly higher in the urban areas. The income share of the top 20 per cent of households is very high in all regions and

areas. They are on average 5.4 and 6.2 times higher than the income shares of the lowest 20 per cent of households in the rural and urban areas respectively.

The regional occupational structure reveals that the most qualified and skilled occupational group (professional and administrative) is small in absolute and relative terms in all regions. Two thirds of this group, however, is concentrated in the Central region, where its average income is higher by nearly one third and one quarter than in the Southern and Northern regions respectively.

In the Northern and Southern regions, farmers represented nearly half of the total employed. Only slightly more than one quarter of the total employed were farmers in the Central region. Production process workers were the highest proportion of the total employed in the Central region and their earnings were also higher than those of their counterparts in the other two regions.

Agricultural and non-agricultural employers were relatively small in number, but earned the highest income in all regions. Non-agricultural employers earned a larger income than employers in the agricultural sector in the Southern and Central regions. In all regions, the self-employed (the majority of whom are in agriculture and who constitute the majority of agricultural labour) earn a lower mean income in agriculture than in non-agricultural activity. This suggests a higher return to capital-labour factors in the non-agricultural sector than to the land-labour factors in agriculture.

Agricultural employees were the majority of the employed in the Southern region. Their mean income was higher by one third than that

of agricultural workers in the Northern region and nearly 13 per cent higher than that of those in the Central region. In the Northern and Central regions the mean income of employees in the non-agricultural sector was higher by one quarter than that of agricultural employees.

At the governorate level, all the measures of income inequality indicated that the Sulaimaniya governorate (in the North) has the most equal distribution of income. Thi-Qar, Qadisiya, Wasit and Kerbela governorates also enjoyed less inequality than the other governorates. In most of these governorates agriculture was the predominant form of economic activity.

Chapter VII examines the distribution of income in a cross-sectional analysis. Multiple regression techniques are used in analysing the relationship between the income shares of different percentile groups, Gini ratios and 11 various economic, social and demographic factors. This investigation covered three areas: the rural and urban areas and the country as a whole.

The R^2s indicated that the selected explanatory variables, operating jointly, explain 53 per cent to 64 per cent of the variance in the rural area's income inequality. These percentages were 47 per cent to 77 per cent and 36 per cent to 72 per cent in the urban areas and in the country as a whole respectively.

The Kuznets hypothesis (inequality describing a U-shaped curve in the course of development) was examined. The results for the rural areas in Iraq were found to provide support for this hypothesis. It was found that relative inequality increased with higher per household

income but only in the early stages of development. This was partly rejected in the case of urban areas and the country as a whole.

The production structure, expressed by both shares of industry and agriculture in GNP, was positively related to inequality in the urban areas that have a higher industrial share. The results for the country as a whole indicated a positive correlation between income inequality and a lower agricultural share.

Urbanization was found to be associated with greater inequality in rural areas. However, in the country as a whole urbanization is associated with greater shares for the middle and lower income groups.

Population growth was found to be positively related to inequality in rural areas but negatively related to inequality in urban areas.

Rural education is chiefly primary; secondary education is concentrated in the urban areas. The rural primary school enrolment rate and the urban literacy rate were found to be positively related to equality.

STATISTICAL APPENDICES

Appendix A

Expenditure on GDP and Sectoral Wages

This Appendix includes three tables related to Chapter II. The first (A.1) shows the expenditure on GDP during the 1964-1971 period. The second (A.2) gives the total wages and total wages as a percentage of GDP by economic sector during the same period. Finally Table (A.3) shows the average earnings of selected social groups, per capita income and consumer price index. It describes the method used in reaching the average earnings of each group.

APPENDIX A
TABLE A.1
Expenditure on Gross Domestic Product in Iraq 1964-1971

(ID. million)

	1964	1965	1966	1967	1968	1969	1970	1971	Rate of Growth %
Private Consumption Expenditure	397.8	455.1	496.8	495.9	547.7	571.0	615.0	680.3	7.8
Government Consumption Expenditure	166.3	178.6	189.1	201.8	220.4	242.5	268.9	301.6	8.8
Gross Domestic Fixed Capital Formation	134.8	143.3	158.9	157.6	154.5	165.4	202.8	219.7	7.1
Exports of Goods and Services	324.8	344.3	366.1	326.1	402.7	412.3	437.5	596.5	8.9
(Less) Imports of Goods and Services	187.9	207.5	221.0	183.2	192.1	205.3	236.6	314.2	7.5
Expenditure on Gross Domestic Product (at Market Price)	835.8	913.8	989.9	998.2	1133.2	1185.9	1287.6	1483.9	8.4
Net Factors income from Abroad (-)	118.3	129.4	138.6	122.6	156.8	154.7	166.0	214.9	8.8
(Less) Indirect Taxes	43.5	47.6	53.3	58.0	67.9	77.1	86.8	87.3	10.4
(Plus) Subsidies	1.4	1.4	1.4	1.7	1.7	0.9	1.6	0.8	-8.2
(Less) Provisions for the Consumption of Fixed Capital	50.5	53.7	57.7	60.9	65.2	69.9	74.4	78.8	6.5
Net National Product at Factor Cost = National Income	624.9	684.5	741.7	758.4	845.0	885.1	962.0	1103.7	8.3

Source: Central Statistical Organization, Annual Abstract of Statistics, 1973, p.339.

APPENDIX A
TABLE A.2
Total Wages and Their Percentage in Gross Domestic Product, 1964-1971 - at factor cost prices

(ID.million and Percentage)

	1964		1965		1966		1967		1968		1969		1970		1971	
	Wages	%	Wages	%	Wages	%	Wages	%	Wages	%	Wages	%	Wages	%	Wages	%
Mining and Quarrying	7.0	2.5	8.1	2.8	8.1	2.7	8.2	3.0	7.6	2.2	7.1	2.1	7.6	1.5	8.0	1.5
Manufacturing	23.6	37.0	26.0	37.5	26.7	35.7	27.4	32.6	32.9	34.8	37.7	30.3	42.4	34.4	46.5	34.4
Construction	13.9	52.1	17.1	56.1	20.2	58.6	18.4	56.1	20.6	56.0	22.3	57.9	22.7	55.7	23.3	53.4
Electricity	3.2	28.8	3.3	27.5	3.5	27.8	3.8	29.7	4.0	26.8	4.4	26.2	5.0	28.1	5.6	29.2
Commodity sectors	47.7	12.7	54.5	13.7	58.5	13.7	57.8	14.5	65.1	13.4	65.1	13.0	75.2	13.8	83.4	11.6
Transport	23.5	51.6	30.2	51.9	33.4	52.8	35.7	55.8	37.6	57.1	39.6	57.3	41.9	58.8	46.4	58.2
Wholesale/retail trade	19.2	30.9	21.6	30.9	23.2	31.1	24.7	31.0	26.9	31.0	27.9	31.0	30.1	31.0	32.7	31.6
Banking	3.4	42.5	3.2	33.7	3.5	28.2	3.9	31.7	4.3	32.8	5.1	32.9	5.3	28.5	5.2	26.0
Distribution sectors	46.1	39.9	55.0	40.0	60.1	40.0	64.3	41.2	68.8	41.5	72.6	41.6	77.8	41.3	84.3	41.5
Public Admin.	80.1	93.8	84.1	94.5	88.8	94.4	92.3	94.0	92.2	88.1	110.4	93.7	116.7	93.9	128.4	93.4
Services	44.5	83.0	49.9	83.3	54.2	83.1	56.4	83.1	62.2	82.5	66.1	69.0	71.7	68.9	80.6	82.3
Services sectors	124.6	89.6	134.0	90.0	143.0	89.8	148.7	89.5	154.4	85.8	165.6	83.7	176.6	83.6	209.0	88.8
GDP exc.Agri. & dwelling	218.4	34.6	243.5	35.6	261.6	35.6	270.8	37.5	288.3	34.6	303.3	34.7	329.6	34.9	376.7	32.6
GDP	218.4	27.3	243.5	27.8	261.6	27.7	270.8	28.5	288.3	26.8	303.3	27.1	329.6	27.2	376.7	26.9

Source: Central Statistical Organization, National Income in Iraq, 1964-1971, Baghdad, 1973.

APPENDIX A
TABLE A.3
Average Earnings of Selected Social Groups, per capita Income and Consumer Price Index, 1964-1971

(ID. & %)

Year	Average Wage per Employee in				Average "Income" per Pensioner	Per Capita Income	Consumer Price Index %
	Oil Sector	Manufacturing Industry		Government Bodies			
		Large Scale	Small Scale				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1964	703.4	265.9	162.1	337.4	189.3	81.3	100.0
1965	725.3	270.7	180.5	339.5	198.6	86.4	99.4
1966	733.0	271.8	184.4	363.8	200.1	90.9	101.5
1967	754.8	285.3	186.4	380.4	213.4	90.1	104.8
1968	891.1	301.1	200.9	400.0	210.9	97.5	107.1
1969	851.4	316.6	186.4	419.0	225.3	99.1	113.2
1970	893.1	324.3	223.7	-	243.9	104.5	118.2
1971	967.6	334.5	213.0	463.1	213.0	116.4	122.4

Note: 1) Total annual paid wages were divided by the average number of workers (Column 1 to Column 4). The number of unpaid workers in the manufacturing industries were excluded.

2) Total civilian and military pensions were considered and divided by the total number of pensioners. (Column 5)

3) The figure in Column 4 for 1971, is actually for 1972. It estimated on the monthly wage bill of May 1972 multiplied by 12 and divided by total reported number of government personnel in that month.

4) The monthly averages Index Numbers of consumer prices for Baghdad and its environs wer used, but its base year, 1963, was adjusted to 1964.

Sources: Column 1: Central Statistical Organization, Annual Abstract of Statistics, 1973, p.168.

Columns 2 and 3: For the period 1964-1969: Central Statistical Organization, Statistical Pocket Book, 1960-1970, pp.100-103; for 1970-1971: from Central Statistical Organization, Annual Abstract of Statistics, 1975, pp.144-145.

Column 4: For the period 1964-1969: Mehdi, F.A., Economic Development and Planning in Iraq, 1960-1970, Da'r El-Talia', Beirut, September 1977, p.29 (Arabic). The figure fo 1971, as mentioned above, refers to 1972, from Central Statistical Organization, The Results of 1972 Personnel in Government Bodies Survey, Part I, May1972, pp.239-240.

Column 5: For the period 1964-1969: Central Statistical Organization, Statistical Pocket Book 1960-1970, p.251. For the period 1970-1971: Central Statistical Organization, Annual Abstract of Statistics, 1973, pp.372-373.

Column 6: Central Statistical Organization, The National Income in Iraq, 1964-1971, December 1973, p.43.

Column 7: Central Statistical Organization, Annual Abstract of Statistics, 1973, p.245.

Appendix B

Method of Estimating the 1971 Regional Accounts

The basic concepts used in estimating the regional accounts are according to the recommendations of the Statistical Office of the United Nations.[1] Two concepts were used, the first is the "gross value added" approach or the "Product" method. This method requires the estimation of the value of total output from which the value of total inputs (materials and services) is deducted.

The second is the "Income" method, and requires adding all factor income accruing to domestic factors of production (labour and capital). It is therefore called gross "factor income". The results from both the "Product" and "Income" methods should be the same.

Estimates for five sectors are provided, namely; agriculture, oil, manufacturing, electricity and construction. The other distributive and services sectors were not covered. This limitation was imposed by data availability constraints. This coincides with other United Nations Statistical Office recommendations for the classification of the economy - the "Material Balance System".[2]

These gross value added calculations are called the "Gross Domestic Product" (GDP) of each sector. Where foreign capital and labour

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1 United Nations, Statistical Office, A system of National Accounts and Supporting Tables, New York, 1960.

2 United Nations, Statistical Office, Basic Principles ..., op. cit.

contribute to production (as in the oil sector) the share of these factors is deducted to give "Gross National Product" (GNP) and by deducting depreciation from this, "Net National Product" (NNP) or net National Income is arrived at.

The valuation of total output is at current factor cost prices and ex-farm prices (in the case of agriculture). The factor costs method requires the exclusion of subsidies and indirect taxes, and that of ex-farm prices excludes trade margins and transportation costs.

Data and Coverage

The sources of data used in the regional estimates are mentioned for each sector individually. Most of the data (either published or unpublished) are from the Central Statistical Organization.

The coverage of sectoral activity by each governorate differs slightly from that recommended by the Statistical Office of the United Nations and this is indicated when it occurs.

1 Agriculture Sector

The agricultural activity covered by these estimates includes two major groupings: a) agricultural products, i.e. field crops, vegetables and fruit and b) livestock products. Two components of agricultural activity, forestry and fishing are not covered. The data on the latter groups are poor even at a national level. It was this data inadequacy at a governorate level that led to the exclusion of these two groups.

The two major groupings of agricultural activity covered are:

1.1 Field Crops, Vegetables, Fruits, Dates and Tobacco

a Field Crops: Wheat, barley, rice, cotton, sesame, chick peas, broad beans, linseed, lentils, millet, maize, corn, oats and dry onion.

b Vegetables: Tomato, eggplant, okra, squash, cucumber, water melon, green pepper, Swiss chard,spinach, cabbage, cauliflower, green onion, carrot, turnip and beetroot.

c Fruits: Orange, sweet lime, sour lime, grapefruit, pomelo, bitter orange, citron, mandarin, other citrus fruits, apples, pears, quince, loquat, other pome fruits, pomegranate, banana, mulberry, olive, castor oil, apricot, peach, greengage, plum, aloubalu, almonds, walnut, pistachio, pecan, grape and fig.

d Dates.

e Tobacco: Tutun and tunbak.

The data for the output of all the above-mentioned products of each governorate were from Central Statistical Organization, Department of Agricultural Statistics. The ex-farm prices in the valuation of output in each governorate were from National Accounts Department. These were based on the wholesale prices of each product in each governorate, deducting estimated trade margins and transportation costs. In some cases, however, absence of data required the calculation of an overall average for the ex-farm price, especially for fruits.

Inputs included seeds, maintenance cost of service animals, fertilizers and insecticides, fuel, oil and spare parts of agricultural

machines. The estimates of inputs were obtained from data from the Department of Agricultural Statistics, National Accounts Department and foreign trade statistics. The deduction of the estimated value of inputs from the total value of output yields the gross value added of agricultural products.

The percentage coverage of 1971 gross value added of agricultural products of all governorates accounted for 98.7 per cent of the national aggregated estimates of the official figures.

1.2 Livestock Products

The only parts of the livestock grouping that were covered were the meat, milk, hide and skins, wool and hair. It was probably the inadequacy of data that led the Central Statistical Organization to make no estimate for the increase in the stock of the animal population in the year concerned. The absence of regional data also caused poultry, eggs and poultry meat to be ignored.

Data on the number of animals slaughtered is estimated by the Department of Industrial Statistics and is published annually for each governorate in the Annual Abstract of Statistics. Estimates of average dressed weight per species slaughtered and the by-products of skin, wool and hair were provided by two sources: first, the Directorate-General of Animal Resources[1] and second, the National

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1 Ministry of Agriculture, Directorate of Animal Resources, Estimates of Animal Resources in Iraq, Baghdad, (mimeo), August 1972.

Accounts Department[1]. The estimates of output were compiled from these, which include meat (mutton, beef, goats, camels and buffalos) and by-products. The same sources give the method of estimating yields of milk from buffalo, cattle, sheep and goats. The number of milker animals had to be estimated from the numbers of the animal population. The estimated quantity of output of livestock products had then to be valued by the appropriate prices.[2] Baghdad prices were used to value the output of the other Central region's governorates, Nineveh prices for the Northern region, and Basrah prices for the Southern governorates.

The maintenance cost of livestock was estimated on the basis of information provided from the National Accounts Department, which included the quantity and price of straw, grain and other items. The value of these inputs was deducted from the value of the livestock products.

Lastly, comparing this study's estimate of the whole 1971 gross value added of agricultural activity with that of official estimates (on national totals) requires adjustment for the items that have not been covered by this study. These items' value added amounted to I.D. 44.5 million according to the official estimates (these include poultry meat, egg, fishery, forestry and agricultural and livestock by-products). This brings the official estimates to I.D. 168 million compared to our estimates of nearly I.D. 154 million, a difference of 8.3 per cent.

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1 Central Statistical Organization, National Accounts Department, Methods on the Estimates of Agricultural Value Added, Working paper, Baghdad, 1974.

2 Central Statistical Organization, Fluctuation of Wholesale and Retail Prices, 1958-1972, Baghdad, 1974, and Al-Bayati, Hilal and Others, The Fluctuation of Agricultural Products' Prices, Baghdad, September 1972.

2 Oil Sector

The factor income method is used in the estimating of this sector's gross value added. The transportation services of crude oil by pipeline is included since its accounts are not separate from those of oil production. Oil refining, however, is included in manufacturing industry.

Data on gross value added, which includes wages and salaries, the government share and the oil companies' share of profits, and depreciation, were obtained from the National Accounts Department. These were related to each of the three oil companies operating in Kirkuk, Nineveh and Basrah governorates. The contribution of Baghdad governorate in the oil sector's value added is through the wages and salaries paid to the employees in the headquarters office of the oil companies.

The estimates show (Table 3.1) gross value added in each of the four governorates, but wages, salaries and depreciation are the only components that are considered in gross product and only wages and salaries are included in the net product estimates as in Table (B.1).

The percentage coverage of 1971 gross value added in the oil sector of the country as a whole (by considering all components of value added) accounted for 100 per cent of the official estimates.

3 Manufacturing Sector

The production approach is used to estimate the gross value added in this sector. A subdivision of the industries according to size of establishment was used to identify the small scale establishments

(employing less than 10 workers) and the large establishments (employing 10 and more workers). All types of industries are included and consist of the following:

1 Mining and Extraction
2 Food Manufacturing
3 Beverages
4 Tobacco
5 Textiles, Wearing Apparel
6 Tailoring of Made-up Clothing
7 Leather and Leather Products
8 Footwear
9 Wood and Furniture
10 Paper, Paper Products and Printing
11 Chemical Industries and Oil Products
12 Non-Metallic Mineral Products
13 Basic Metal Manufacturing Industries
14 Manufacture and Repair of Machinery
15 Manufacture of Electrical Machinery
16 Apparatus and Appliances
17 Manufacture of Transport Equipment
18 Manufacture and Assembling of Watches
19 Other Manufacturing and Repairs.

The total value of output and input for this sector is estimated by using the results of the Industrial Survey which was published separately for the small and large establishments. The data are at factor cost; that is indirect taxes (on such products as sugar, cement, cigarettes and oil products) have been deducted, and subsidies have been added.

The overall coverage of the regional estimates for the value added in industry accounted for 77 per cent of the official estimates.

4 Electricity and Water Sector

The electricity and water sector is publicly owned. The National Electricity Administration (of the Ministry of Industry) controls the three major power stations in the Northern (Nineveh), Central (Baghdad) and Southern (Basrah) regions. The Baghdad Water Supply Administration is responsible for the water supply in the Baghdad governorate. The Water and Electricity Boards are linked with the municipalities in each governorate (Ministry of Municipality).

The data from the Industrial Survey which covers all this sector's activity together with data from the budget accounts of the above-mentioned bodies wereused to estimate gross value added by means of the income method.

Similar results were reached by comparing the official estimates to those of this study.

5 Construction and Building Sector

The data on gross value added by factor incomes are basically from the Construction Survey. The statistics cover the public and private sector by governorate showing the wages paid and the estimated cost of buildings, roads, bridges, drains, dams and building repairs. Value added was obtained by adding the total wages to the estimates of the profits of contractors, depreciation and the rent of machines, from unpublished data collected by the Construction Statistics Department and National Accounts Department.

The coverage excludes private sector building and construction in rural areas, as data are not available at the regional level.

The estimates of 1971 value added in this study are identical with those of the official estimates.

APPENDIX B

TABLE B.1
Regional Income of the Commodity Sectors, 1956 and 1971 - at factor cost prices.

(ID. million)

GOVERNORATES	AGRICULTURE		OIL		MANUFACTURING INDUSTRY		ELECTRICITY		CONSTRUCTION		NET DOMESTIC PRODUCT		INCOME TO ABROAD		NET NATIONAL INCOME		PROFITS FROM OIL COMPANIES		NATIONAL INCOME (EXCLUDING PROFITS FROM OIL COMPANIES	
	1956	1971	1956	1971	1956	1971	1956	1971	1956	1971	1956	1971	1956	1971	1956	1971	1956	1971	1956	1971
NORTHERN REGION	30.899	39.519	98.750	341.019	4.338	10.102	0.404	2.213	6.003	7.207	140.394	400.060	(-) 46.786	(-)150.049	93.608	250.011	46.786	183.394	46.822	66.617
			(5.178)	(7.576)																
Dhok	(12.666)	6.099	(5.457)	8.696	(2.943)	0.080	(0.217)	0.041	(1.690)	0.545	(22.973)	6.765	(-) (2.390)	0	(20.583)	6.765	(2.390)	0	(18.193)	6.765
Nineveh		10.942				5.705		0.385		3.403		29.131		(-) 3.628		25.503		4.435		21.068
			(0.677)	(0.633)																
Sulaimaniya	4.892	9.400	0	0	0.447	2.204	0.031	0.331	2.664	1.146	8.034	13.081	0	0	8.034	13.081	0	0	8.034	13.081
Kirkuk	6.454	7.547	93.293	332.323	0.646	1.413	0.130	1.157	1.327	1.105	101.850	343.545	(-) 44.396	(-)146.421	57.454	197.124	44.396	178.959	13.058	18.165
			(4.501)	(6.943)																
Arbil	6.887	5.531	0	0	0.302	0.700	0.026	0.299	0.322	1.008	7.537	7.538	0	0	7.537	7.538	0	0	7.537	7.538
CENTRAL REGION	33.066	72.518	9.955	0.600	21.117	65.994	1.387	9.335	14.597	25.492	80.122	173.939	(-) 1.345	0	78.777	173.939	4.715	0	74.062	173.939
			(3.895)	(0.600)																
Diala	6.218	9.691	0	0	0.913	1.778	0.038	0.307	0.486	1.941	7.655	13.717	0	0	7.655	13.717	0	0	7.655	13.717
Anbar	2.148	3.930	0	0	0.175	0.837	0.026	0.225	0.201	0.828	2.550	5.820	0	0	2.550	5.820	0	0	2.550	5.820
Baghdad	11.174	29.623	9.955	0.600	17.428	50.976	1.108	7.514	11.040	18.860	50.705	107.573	(-) 1.345	0	49.360	107.573	4.715	0	44.645	107.573
			(3.895)	(0.600)																
Babylon	6.648	11.974	0	0	1.173	7.361	0.046	0.434	0.677	1.229	8.544	20.998	0	0	8.544	20.998	0	0	8.544	20.998
Kerbela	0.957	6.352	0	0	1.205	3.036	0.130	0.637	0.745	1.689	3.037	11.714	0	0	3.037	11.714	0	0	3.037	11.714
Wasit	5.921	10.948	0	0	0.223	2.006	0.039	0.218	1.448	0.945	7.631	14.117	0	0	7.631	14.117	0	0	7.631	14.117
SOUTHERN REGION	24.114	32.795	35.993	161.287	3.474	9.081	0.279	3.139	3.425	6.907	67.285	213.209	(-) 17.358	(-) 71.142	49.927	142.067	17.358	86.951	32.569	55.116
			(1.277)	(3.194)																
Qadisiya	(6.378)	11.133	0	0	(0.638)	0.832	(0.052)	0.241	(0.752)	0.599	(7.820)	12.805	0	0	(7.820)	12.805	0	0	(7.820)	12.805
Muthanna		2.036	0	0		1.374		0.078		0.306		3.794	0	0		3.794	0	0		3.794
Thi-Qar	6.643	6.455	0	0	0.191	0.669	0.021	0.260	0.236	0.689	7.091	8.073	0	0	7.091	8.073	0	0	7.091	8.073
Maysan	7.809	8.002	0	0	0.340	1.759	0.039	0.150	0.249	0.627	8.437	10.538	0	0	8.437	10.538	0	0	8.437	10.538
Basrah	3.284	5.169	35.993	161.287	2.305	4.447	0.167	2.410	2.188	4.686	43.937	177.999	(-) 17.358	(-) 71.142	26.579	106.857	17.358	86.951	9.221	19.906
			(1.277)	(3.194)																
ALL GOVERNORATES	88.079	144.832	144.698	502.906	28.929	85.177	2.070	14.688	24.025	39.606	287.801	787.209	(-) 65.489	(-)221.191	222.312	566.018	68.859	270.345	153.453	295.673
			(10.350)	(11.370)																

Source: See Appendix B and the 1956 figures from Haseab Khair al Din, The National Income in Iraq, 1953-61, Oxford University Press, London, 1964, Table 107, p.179.

Note: Wages and Salaries in oil sector are in brackets.

Appendix C

Income Distribution Data by Regions and Governorates

Sources of 1971 Income Data

The source of 1971 income data is the "Household Budget and Living Conditions Survey of 1971-1972". The survey contained both expenditure and income data. The Central Statistical Organization issued three reports on household expenditure for the three stages of the survey[1], but none on household income.

This study is the first to use the income data which were collected in the questionnaire form attached. The geographical location of each household was noted and was coded in the present study to distinguish urban from rural areas.

The data were processed at the University College Computer Centre (London). The Statistical Package for Social Sciences[2], adjusted to fit the requirements of this study provided the necessary programmes.

Further detailed results, covering the size distribution of income in the Northern, Central and Southern regions and the urban, rural, overall distribution by governorate and a comparison between Iraqi income distribution and that of other oil producing countries can be found in this Appendix.

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1 Central Statistical Organization, Household Budget and Living Conditions Survey, 1971-1972, First Stage, July 1971, Baghdad, 1973; The Second Stage, January 1972, Baghdad, 1974 and the Third Stage, April 1972, Baghdad, 1975.

2 Norman H. Nie, C. Hadlai Hull and Others, op. cit.

Household No.

INCOME QUESTIONNAIRE

To be filled for the previous month (Month.....)

Income data should be reported to nearest Dinar

1. Household Income from Different Sources

Name	Wages and Salaries	Pensions and the like	Income from Property			Income from Activity			Other Sources	Total
			Dwelling ownership	Agri. Land	Other	Agri.	Trade	Other		
1.										
2.										
3.										
4.										
.										
.										
.										

2. Supplementary Information on Income from Economic Activity

Name	Agricultural Activity							(.....) Activity					Notes
	Value of Sales	Value of Self-Consumed	Stock	Total 1, 2, + 3	Rent of Land	Wages of Workers	Other Agri. Costs	Total 5, 6, + 7	Value of Sales	Value of Inputs	Other costs	Total 10 + 11	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		
1.													
2.													
3.													
.													
.													

APPENDIX C
TABLE (C.1)
NORTHERN REGION
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	1.3	0.2	1.3	0.2	Lowest 10%	3.1
100 - 149	3.4	0.9	4.7	1.1	Lowest 20%	7.6
150 - 199	7.5	2.8	12.2	3.9	Lowest 30%	12.9
200 - 249	12.4	5.9	24.6	9.8	Lowest 40%	19.2
250 - 299	11.4	6.5	36.0	16.3	Lowest 50%	26.6
300 - 399	17.2	12.6	53.2	28.9	Lowest 60%	35.4
400 - 499	13.0	12.4	66.2	41.3	Lowest 70%	45.7
500 - 599	10.5	12.3	76.7	53.6	Lowest 80%	58.0
600 - 699	7.0	9.4	83.7	63.0	Lowest 90%	73.4
700 - 799	4.8	7.6	88.5	70.6	100%	100.0
800 - 899	1.8	3.3	90.3	73.9		
900 - 999	3.0	6.1	93.3	80.0		
1000-1249	3.5	8.4	96.8	88.4		
1250 and over	3.2	11.6	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3432
Standard Deviation of Income	331.4
Total Household Incomes (ID)	404327
Total Number of Households	861
Average Income per Household (ID)	470
Average Number of Persons per Household	6.6

APPENDIX C
TABLE (C.2)
CENTRAL REGION
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0.4	0.0	0.4	0.0	Lowest 10%	2.8
100 - 149	1.7	0.3	2.1	0.3	Lowest 20%	7.1
150 - 199	3.0	0.8	5.1	1.1	Lowest 30%	12.3
200 - 249	5.3	1.8	10.4	2.9	Lowest 40%	18.4
250 - 299	6.4	2.6	16.8	5.5	Lowest 50%	25.5
300 - 399	16.0	8.2	32.8	13.7	Lowest 60%	33.9
400 - 499	13.2	8.6	46.0	22.3	Lowest 70%	44.0
500 - 599	10.2	8.1	56.2	30.4	Lowest 80%	56.5
600 - 699	8.1	7.5	64.3	37.9	Lowest 90%	74.1
700 - 799	7.6	8.2	71.9	46.1	100%	100.0
800 - 899	5.1	6.3	77.0	52.4		
900 - 999	4.2	5.7	81.2	58.1		
1000-1249	6.8	10.8	88.0	68.9		
1250 and over	12.0	31.1	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3552
Standard Deviation of Income	507.2
Total Household Incomes (ID)	927550
Total Number of Households	1346
Average Income per Household (ID)	689
Average Number of Persons per Household	7.4

APPENDIX C
TABLE (C.3)
SOUTHERN REGION
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0.7	0.0	0.7	0.0	Lowest 10%	3.1
100 - 149	2.6	0.7	3.3	0.7	Lowest 20%	7.5
150 - 199	7.8	2.8	11.1	3.5	Lowest 30%	13.0
200 - 249	9.0	4.1	20.1	7.6	Lowest 40%	19.9
250 - 299	10.3	5.6	30.4	13.2	Lowest 50%	26.9
300 - 399	20.1	14.1	50.5	27.3	Lowest 60%	36.1
400 - 499	16.6	15.3	67.1	42.6	Lowest 70%	45.8
500 - 599	9.4	10.4	76.4	53.0	Lowest 80%	57.6
600 - 699	7.0	9.2	83.5	62.2	Lowest 90%	72.9
700 - 799	2.7	4.1	86.2	66.3	100%	100.0
800 - 899	3.6	6.2	89.8	72.5		
900 - 999	1.9	3.7	91.7	76.2		
1000-1249	3.8	8.5	95.5	84.7		
1250 and over	4.5	15.3	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3300
Standard Deviation of Income	355.6
Total Household Incomes (ID)	363148
Total Number of Households	731
Average Income per Household (ID)	497
Average Number of Persons per Household	7.0

APPENDIX C
TABLE (C.4)
NORTHERN REGION
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	1.9	0.3	1.9	0.3	Lowest 10%	2.9
100 - 149	3.1	0.8	5.0	1.1	Lowest 20%	7.3
150 - 199	7.2	2.6	12.2	3.7	Lowest 30%	12.3
200 - 249	13.9	6.4	26.1	10.1	Lowest 40%	18.2
250 - 299	11.4	6.3	37.5	16.4	Lowest 50%	25.2
300 - 399	16.2	11.4	53.7	27.8	Lowest 60%	33.6
400 - 499	9.2	8.5	62.9	36.3	Lowest 70%	44.3
500 - 599	11.1	12.5	74.0	48.8	Lowest 80%	56.7
600 - 699	5.9	7.7	79.9	56.5	Lowest 90%	73.3
700 - 799	5.6	8.6	85.5	65.1	100%	100.0
800 - 899	2.8	4.9	88.3	70.0		
900 - 999	3.9	7.5	92.2	77.5		
1000-1249	4.2	9.7	96.4	87.2		
1250 and over	3.6	12.8	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3595
Standard Deviation of Income	361.1
Total Household Incomes (ID)	174468
Total Number of Households	359
Average Income per Household (ID)	486
Average Number of Persons per Household	7.0

APPENDIX C
TABLE (C.5)
CENTRAL REGION
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0.1	0.0	0.1	0.0	Lowest 10%	3.0
100 - 149	0.6	0.1	0.7	0.1	Lowest 20%	7.5
150 - 199	2.2	0.5	2.9	0.6	Lowest 30%	12.5
200 - 249	4.8	1.5	7.7	2.1	Lowest 40%	18.6
250 - 299	6.0	2.3	13.7	4.4	Lowest 50%	25.5
300 - 399	17.5	8.7	31.2	13.1	Lowest 60%	33.7
400 - 499	14.3	9.0	45.5	22.1	Lowest 70%	43.7
500 - 599	10.6	8.1	56.1	30.2	Lowest 80%	56.1
600 - 699	7.9	7.2	64.0	37.4	Lowest 90%	74.5
700 - 799	7.2	7.6	71.2	45.0	100%	100.0
800 - 899	5.1	6.1	76.3	51.1		
900 - 999	4.1	5.5	80.4	56.6		
1000-1249	6.7	10.5	87.1	67.1		
1250 and over	12.9	32.9	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3891
Standard Deviation of Income	527.9
Total Household Incomes (ID)	659010
Total Number of Households	926
Average Income per Household (ID)	712
Average Number of Persons per Household	7.5

APPENDIX C
TABLE (C.6)
SOUTHERN REGION
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0.6	0.1	0.6	0.1	Lowest 10%	2.8
100 - 149	3.1	0.7	3.7	0.8	Lowest 20%	6.6
150 - 199	10.1	3.2	13.8	4.0	Lowest 30%	11.4
200 - 249	8.5	3.5	22.3	7.5	Lowest 40%	17.6
250 - 299	8.2	4.1	30.5	11.6	Lowest 50%	24.2
300 - 399	17.9	11.3	48.4	22.9	Lowest 60%	32.5
400 - 499	14.2	11.8	62.6	34.7	Lowest 70%	42.1
500 - 599	9.4	9.4	72.0	44.1	Lowest 80%	53.9
600 - 699	6.0	7.1	78.0	51.2	Lowest 90%	69.5
700 - 799	2.2	3.0	80.2	54.2	100%	100.0
800 - 899	4.4	6.8	84.6	61.0		
900 - 999	1.9	3.3	86.5	64.3		
1000-1249	5.6	11.6	92.1	75.9		
1250 and over	7.9	24.1	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3795
Standard Deviation of Income	428.5
Total Household Incomes (ID)	174156
Total Number of Households	318
Average Income per Household (ID)	548
Average Number of Persons per Household	7.1

APPENDIX C

TABLE (C.7)
NORTHERN REGION
RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0.8	0.1	0.8	0.1	Lowest 10%	3.2
100 - 149	3.6	1.0	4.4	1.1	Lowest 20%	7.8
150 - 199	7.7	2.9	12.1	4.0	Lowest 30%	13.4
200 - 249	11.3	5.5	23.4	9.5	Lowest 40%	20.2
250 - 299	11.3	6.7	34.7	16.2	Lowest 50%	27.8
300 - 399	17.9	13.6	52.6	29.8	Lowest 60%	37.0
400 - 499	16.0	15.6	68.6	45.4	Lowest 70%	47.1
500 - 599	9.9	11.9	78.5	57.3	Lowest 80%	59.4
600 - 699	7.7	10.8	86.2	68.1	Lowest 90%	74.2
700 - 799	4.2	6.8	90.4	74.9	100%	100.0
800 - 899	1.1	2.0	91.5	76.9		
900 - 999	2.5	5.1	94.0	82.0		
1000-1249	3.0	7.4	97.0	89.4		
1250 and over	3.0	10.6	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3257
Standard Deviation of Income	308.3
Total Household Incomes (ID)	166332
Total Number of Households	363
Average Income per Household (ID)	458
Average Number of Persons per Household	6.3

APPENDIX C

TABLE (C.8)
CENTRAL REGION
RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	1.0	0.1	1.0	0.1	Lowest 10%	2.5
100 - 149	3.9	0.9	4.9	1.0	Lowest 20%	6.2
150 - 199	4.9	1.4	9.8	2.4	Lowest 30%	11.2
200 - 249	6.6	2.2	16.4	4.6	Lowest 40%	17.3
250 - 299	7.2	3.1	23.6	7.7	Lowest 50%	24.7
300 - 399	12.5	6.9	36.1	14.6	Lowest 60%	33.6
400 - 499	10.9	7.5	47.0	22.1	Lowest 70%	44.4
500 - 599	9.5	8.1	56.5	30.2	Lowest 80%	57.3
600 - 699	8.6	8.4	65.1	38.6	Lowest 90%	73.8
700 - 799	8.2	9.7	73.3	48.3	100%	100.0
800 - 899	5.3	6.9	78.6	55.2		
900 - 999	4.3	6.3	82.9	61.5		
1000-1249	6.9	11.8	89.8	73.3		
1250 and over	10.2	26.7	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3716
Standard Deviation of Income	455.7
Total Household Incomes (ID)	195060
Total Number of Households	304
Average Income per Household (ID)	642
Average Number of Persons per Household	7.2

APPENDIX C

TABLE (C.9)
SOUTHERN REGION
RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0.7	0.1	0.7	0.1	Lowest 10%	3.5
100 - 149	2.4	0.6	3.1	0.7	Lowest 20%	8.6
150 - 199	6.0	2.3	9.1	3.0	Lowest 30%	14.5
200 - 249	9.4	4.7	18.5	7.7	Lowest 40%	22.1
250 - 299	11.7	6.9	30.2	14.6	Lowest 50%	29.7
300 - 399	21.8	16.6	52.0	31.2	Lowest 60%	39.2
400 - 499	18.5	18.6	70.5	49.8	Lowest 70%	49.3
500 - 599	9.4	11.3	79.9	61.1	Lowest 80%	61.2
600 - 699	7.7	11.0	87.6	72.1	Lowest 90%	76.0
700 - 799	3.0	4.9	90.6	77.0	100%	100.0
800 - 899	3.0	5.5	93.6	82.5		
900 - 999	2.0	4.2	95.6	86.7		
1000-1249	2.4	5.7	98.0	92.4		
1250 and over	2.0	7.6	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.2971
Standard Deviation of Income	284.2
Total Household Incomes (ID)	136452
Total Number of Households	298
Average Income per Household (ID)	458
Average Number of Persons per Household	6.9

APPENDIX C
TABLE (C.10)
GOVERNORATE: DHOK
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.3
100 - 149	2.2	0.6	2.2	0.6	Lowest 20%	8.0
150 - 199	9.7	3.3	11.9	3.9	Lowest 30%	13.2
200 - 249	17.2	8.8	29.1	12.7	Lowest 40%	19.3
250 - 299	15.1	9.1	44.2	21.8	Lowest 50%	26.3
300 - 399	12.9	10.0	57.1	31.8	Lowest 60%	34.7
400 - 499	16.1	16.0	73.2	47.8	Lowest 70%	44.6
500 - 599	5.4	6.1	78.6	53.9	Lowest 80%	55.9
600 - 699	10.7	15.6	89.3	69.5	Lowest 90%	71.0
700 - 799	0	0	0	0	100%	100.0
800 - 899	0	0	0	0		
900 - 999	4.3	9.1	93.6	78.6		
1000-1249	4.3	11.0	97.9	89.6		
1250 and over	2.1	10.4	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3548
Standard Deviation of Income	341.1
Total Household Incomes (ID)	42467
Total Number of Households	93
Average Income per Household (ID)	451
Average Number of Persons per Household	7.1

APPENDIX C
TABLE (C.11)
GOVERNORATE: NINEVEH
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	3.0	0.4	3.0	0.4	Lowest 10%	2.4
100 - 149	6.9	2.0	9.9	2.4	Lowest 20%	6.9
150 - 199	11.4	4.6	21.3	7.0	Lowest 30%	11.5
200 - 249	10.7	5.5	32.0	12.5	Lowest 40%	17.5
250 - 299	8.0	5.0	40.0	17.5	Lowest 50%	25.3
300 - 399	15.3	11.9	55.3	29.4	Lowest 60%	34.2
400 - 499	8.8	8.9	64.1	39.3	Lowest 70%	46.7
500 - 599	12.2	15.2	76.3	53.5	Lowest 80%	59.0
600 - 699	6.9	10.2	83.2	63.7	Lowest 90%	75.3
700 - 799	8.8	15.0	92.0	78.7	100%	100.0
800 - 899	1.9	3.5	93.9	82.2		
900 - 999	2.3	5.2	96.2	87.4		
1000-1249	1.9	5.0	98.1	92.4		
1250 and over	1.9	7.6	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3595
Standard Deviation of Income	313.6
Total Household Incomes (ID)	114697
Total Number of Households	262
Average Income per Household (ID)	438
Average Number of Persons per Household	6.1

APPENDIX C
TABLE (C.12)
GOVERNORATE: SULAIMANIYA
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	4.1
100 - 149	0	0	0	0	Lowest 20%	9.0
150 - 199	1.3	0.4	1.3	0.4	Lowest 30%	15.4
200 - 249	6.8	2.7	8.1	3.1	Lowest 40%	25.3
250 - 299	12.2	6.1	20.3	9.2	Lowest 50%	33.8
300 - 399	17.7	11.4	38.0	23.6	Lowest 60%	40.1
400 - 499	17.7	15.0	55.7	35.6	Lowest 70%	50.6
500 - 599	15.0	15.7	70.7	51.3	Lowest 80%	62.1
600 - 699	9.5	10.9	80.2	62.2	Lowest 90%	75.4
700 - 799	4.8	6.7	85.0	68.9	100%	100.0
800 - 899	3.4	5.4	88.4	74.3		
900 - 999	3.4	6.1	91.8	80.4		
1000-1249	4.8	10.2	96.6	90.6		
1250 and over	3.4	9.4	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.2656
Standard Deviation of Income	288.9
Total Household Incomes (ID)	79197
Total Number of Households	147
Average Income per Household (ID)	537
Average Number of Persons per Household	6.1

APPENDIX C
TABLE (C.13)
GOVERNORATE: KIRKUK
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0.5	0.1	0.5	0.1	Lowest 10%	3.2
100 - 149	2.0	0.4	2.5	0.5	Lowest 20%	7.6
150 - 199	6.4	2.2	8.9	2.7	Lowest 30%	12.9
200 - 249	10.3	4.5	19.2	7.2	Lowest 40%	19.3
250 - 299	12.7	6.7	31.9	13.9	Lowest 50%	26.1
300 - 399	18.6	12.5	50.5	26.4	Lowest 60%	34.8
400 - 499	12.7	11.2	63.2	37.6	Lowest 70%	44.7
500 - 599	11.8	12.4	75.0	50.0	Lowest 80%	56.8
600 - 699	2.9	3.9	77.9	53.9	Lowest 90%	72.9
700 - 799	4.9	6.8	82.8	60.7	100%	100.0
800 - 899	2.5	3.8	85.3	64.5		
900 - 999	4.9	8.8	90.2	73.3		
1000-1249	4.4	9.3	94.6	82.6		
1250 and over	5.4	17.4	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3489
Standard Deviation of Income	368.5
Total Household Incomes (ID)	104367
Total Number of Households	204
Average Income per Household (ID)	512
Average Number of Persons per Household	6.6

APPENDIX C
TABLE (C.14)
GOVERNORATE: ARBIL
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	1.3	0.2	1.3	0.2	Lowest 10%	3.6
100 - 149	3.3	1.1	4.6	1.3	Lowest 20%	8.8
150 - 199	7.1	3.1	11.7	4.4	Lowest 30%	14.0
200 - 249	20.9	11.0	32.6	15.4	Lowest 40%	20.3
250 - 299	11.8	7.8	44.4	23.2	Lowest 50%	27.9
300 - 399	20.9	17.4	65.3	40.6	Lowest 60%	36.2
400 - 499	13.7	14.9	79.0	55.5	Lowest 70%	45.7
500 - 599	5.2	6.6	84.2	62.1	Lowest 80%	56.8
600 - 699	7.8	11.3	92.0	73.4	Lowest 90%	70.5
700 - 799	0.7	1.7	92.7	75.1	100%	100.0
800 - 899	0.7	1.4	93.4	76.5		
900 - 999	0.7	1.4	94.1	77.9		
1000-1249	3.3	9.3	97.4	87.2		
1250 and over	2.6	12.8	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3518
Standard Deviation of Income	327.7
Total Household Incomes (ID)	63599
Total Number of Households	152
Average Income per Household (ID)	414
Average Number of Persons per Household	6.4

APPENDIX C
TABLE (C.15)
GOVERNORATE: DIALA
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0.7	0.1	0.7	0.1	Lowest 10%	3.1
100 - 149	2.7	0.6	3.4	0.7	Lowest 20%	7.8
150 - 199	4.7	1.6	8.1	2.3	Lowest 30%	14.2
200 - 249	5.4	2.2	13.5	4.5	Lowest 40%	20.7
250 - 299	6.8	3.4	20.3	7.9	Lowest 50%	28.5
300 - 399	23.0	15.0	43.3	22.9	Lowest 60%	37.0
400 - 499	15.5	12.9	58.8	35.8	Lowest 70%	47.7
500 - 599	8.1	8.2	66.9	44.0	Lowest 80%	60.0
600 - 699	9.5	11.2	76.4	55.2	Lowest 90%	76.1
700 - 799	8.1	10.9	84.5	66.1	100%	100.0
800 - 899	2.3	5.5	87.8	71.6		
900 - 999	1.3	2.8	89.1	74.4		
1000-1249	6.8	13.2	95.9	87.6		
1250 and over	4.1	12.4	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3152
Standard Deviation of Income	348.1
Total Household Incomes (ID)	80619
Total Number of Households	148
Average Income per Household (ID)	541
Average Number of Persons per Household	6.1

APPENDIX C
TABLE (C.16)
GOVERNORATE: ANBAR
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.5
100 - 149	1.7	0.7	1.7	0.7	Lowest 20%	7.8
150 - 199	11.7	3.9	13.4	4.6	Lowest 30%	12.8
200 - 249	13.3	6.4	26.7	11.0	Lowest 40%	18.4
250 - 299	13.3	7.4	40.0	18.4	Lowest 50%	25.8
300 - 399	18.4	13.7	58.4	32.1	Lowest 60%	33.6
400 - 499	10.0	9.2	68.4	41.3	Lowest 70%	43.2
500 - 599	3.3	4.0	71.7	45.3	Lowest 80%	58.4
600 - 699	3.3	5.4	75.0	50.7	Lowest 90%	74.9
700 - 799	11.7	18.1	86.7	68.8	100%	100.0
800 - 899	8.3	15.4	95.0	84.2		
900 - 999	3.3	8.2	98.3	92.4		
1000-1249	0	0	0	0		
1250 and over	1.7	7.6	100.0	100.0		
TOTAL	100.0	100 .0				

Gini Concentration Ratio	0.3495
Standard Deviation of Income	327.1
Total Household Incomes (ID)	27867
Total Number of Households	60
Average Income per Household (ID)	468
Average Number of Persons per Household	7.5

APPENDIX C
TABLE (C.17)
GOVERNORATE: BAGHDAD
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.0
100 - 149	0.1	0.0	0.1	0.0	Lowest 20%	7.4
150 - 199	1.4	0.3	1.5	0.3	Lowest 30%	12.4
200 - 249	5.0	1.5	6.5	1.8	Lowest 40%	18.4
250 - 299	5.1	1.8	11.6	3.6	Lowest 50%	25.3
300 - 399	15.4	7.0	27.0	10.6	Lowest 60%	34.0
400 - 499	14.0	8.3	41.0	18.9	Lowest 70%	44.3
500 - 599	9.4	6.7	50.4	25.6	Lowest 80%	57.2
600 - 699	8.1	6.9	58.5	32.5	Lowest 90%	76.5
700 - 799	7.3	7.2	65.8	39.6	100%	100.0
800 - 899	6.3	7.0	72.1	46.7		
900 - 999	4.4	5.5	76.5	52.2		
1000-1249	8.0	11.4	84.5	63.6		
1250 and over	15.5	36.4	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3474
Standard Deviation of Income	552.2
Total Household Incomes (ID)	569241
Total Number of Households	742
Average Income per Household (ID)	767
Average Number of Persons per Household	7.6

APPENDIX C
TABLE (C.18)
GOVERNORATE: BABYLON
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	2.0	0.2	2.0	0.2	Lowest 10%	2.1
100 - 149	3.9	0.8	5.9	1.0	Lowest 20%	5.5
150 - 199	4.6	1.2	10.5	2.2	Lowest 30%	10.2
200 - 249	5.9	1.8	16.4	4.0	Lowest 40%	15.4
250 - 299	8.5	3.6	24.9	7.6	Lowest 50%	22.1
300 - 399	16.3	8.4	41.2	16.0	Lowest 60%	30.4
400 - 499	8.5	5.9	49.7	21.9	Lowest 70%	41.1
500 - 599	11.8	9.7	61.5	31.6	Lowest 80%	54.9
600 - 699	2.0	1.7	63.5	33.3	Lowest 90%	74.3
700 - 799	2.6	2.8	66.1	36.1	100%	100.0
800 - 899	4.6	5.9	70.7	42.0		
900 - 999	7.8	10.6	78.5	52.6		
1000-1249	7.8	12.2	86.3	64.8		
1250 and over	13.7	35.2	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3926
Standard Deviation of Income	534.9
Total Household Incomes (ID)	104289
Total Number of Households	153
Average Income per Household (ID)	685
Average Number of Persons per Household	7.1

APPENDIX C
TABLE (C.19)
GOVERNORATE: KERBELA
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0.7	0.1	0.7	0.1	Lowest 10%	2.7
100 - 149	6.0	1.5	6.7	1.6	Lowest 20%	6.7
150 - 199	6.0	2.0	12.7	3.6	Lowest 30%	11.9
200 - 249	8.2	3.5	20.9	7.1	Lowest 40%	19.2
250 - 299	9.7	5.1	30.6	12.2	Lowest 50%	27.6
300 - 399	10.4	7.7	41.0	19.9	Lowest 60%	37.3
400 - 499	14.2	12.2	55.2	32.1	Lowest 70%	48.2
500 - 599	17.9	19.5	73.1	51.6	Lowest 80%	60.3
600 - 699	7.5	9.5	80.6	61.1	Lowest 90%	76.0
700 - 799	7.5	11.7	88.1	72.8	100%	100.0
800 - 899	2.2	3.7	90.3	76.5		
900 - 999	3.0	5.6	93.3	82.1		
1000-1249	3.0	6.5	96.3	88.6		
1250 and over	3.7	11.4	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3249
Standard Deviation of Income	303.4
Total Household Incomes (ID)	67154
Total Number of Households	133
Average Income per Household (ID)	504
Average Number of Persons per Household	7.6

APPENDIX C
TABLE (C.20)
GOVERNORATE: WASIT
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.3
100 - 149	1.8	0.4	1.8	0.4	Lowest 20%	8.1
150 - 199	2.7	0.6	4.5	1.0	Lowest 30%	13.5
200 - 249	0	0	0	0	Lowest 40%	20.2
250 - 299	4.6	1.9	9.1	2.9	Lowest 50%	28.5
300 - 399	15.5	7.4	24.6	10.3	Lowest 60%	37.3
400 - 499	11.8	7.1	36.4	17.4	Lowest 70%	47.0
500 - 599	10.0	7.9	46.4	25.3	Lowest 80%	58.0
600 - 699	17.3	15.3	63.7	40.6	Lowest 90%	75.2
700 - 799	13.6	13.8	77.3	54.4	100%	100.0
800 - 899	1.8	2.1	79.1	56.5		
900 - 999	1.8	2.9	80.9	59.4		
1000-1249	6.4	9.1	87.3	68.5		
1250 and over	12.7	31.5	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3220
Standard Deviation of Income	480.6
Total Household Incomes (ID)	78382
Total Number of Households	110
Average Income per Household (ID)	714
Average Number of Persons per Household	6.8

APPENDIX C
TABLE (C.21)
GOVERNORATE: QADISIYA
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.0
100 - 149	2.6	0.8	2.6	0.8	Lowest 20%	8.6
150 - 199	9.7	3.9	12.3	4.7	Lowest 30%	14.8
200 - 249	8.4	4.2	20.7	8.9	Lowest 40%	21.2
250 - 299	18.7	11.8	39.4	20.7	Lowest 50%	29.0
300 - 399	18.7	14.7	58.1	35.4	Lowest 60%	37.4
400 - 499	16.1	16.7	74.2	52.1	Lowest 70%	47.7
500 - 599	12.3	15.1	86.5	67.2	Lowest 80%	59.2
600 - 699	4.5	6.1	91.0	73.3	Lowest 90%	71.9
700 - 799	1.9	3.0	92.9	76.3	100%	100.0
800 - 899	0.7	1.6	93.6	77.9		
900 - 999	1.3	3.4	94.9	81.3		
1000-1249	1.9	5.9	96.8	87.2		
1250 and over	3.2	12.8	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3201
Standard Deviation of Income	326.3
Total Household Incomes (ID)	68114
Total Number of Households	155
Average Income per Household (ID)	443
Average Number of Persons per Household	7.0

APPENDIX C
TABLE (C.22)
GOVERNORATE: MUTHANNA
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.8
100 - 149	1.8	0.5	1.8	0.5	Lowest 20%	8.6
150 - 199	0	0	0	0	Lowest 30%	14.0
200 - 249	12.3	4.9	14.1	5.4	Lowest 40%	20.4
250 - 299	19.3	10.5	33.4	15.9	Lowest 50%	27.7
300 - 399	28.1	20.0	61.5	35.9	Lowest 60%	34.4
400 - 499	14.0	12.3	75.5	48.2	Lowest 70%	43.4
500 - 599	5.3	6.2	80.8	54.4	Lowest 80%	53.5
600 - 699	1.7	3.0	82.5	57.4	Lowest 90%	70.4
700 - 799	0	0	0	0	100%	100.0
800 - 899	5.3	9.0	87.8	66.4		
900 - 999	3.5	6.4	91.3	72.8		
1000-1249	1.7	3.6	93.0	76.4		
1250 and over	7.0	23.6	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3518
Standard Deviation of Income	402.9
Total Household Incomes (ID)	29092
Total Number of Households	57
Average Income per Household (ID)	500
Average Number of Persons per Household	7.5

APPENDIX C
TABLE (C.23)
GOVERNORATE: THI-QAR
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0.5	0.1	0.5	0.1	Lowest 10%	3.5
100 - 149	1.6	0.4	2.1	0.5	Lowest 20%	8.5
150 - 199	6.6	2.4	8.7	2.9	Lowest 30%	14.2
200 - 249	12.0	5.9	20.7	8.8	Lowest 40%	21.4
250 - 299	10.9	6.3	31.6	15.1	Lowest 50%	28.8
300 - 399	20.8	15.5	52.4	30.6	Lowest 60%	38.4
400 - 499	15.8	16.2	68.2	46.8	Lowest 70%	48.8
500 - 599	7.7	8.7	75.9	55.5	Lowest 80%	61.4
600 - 699	7.1	10.3	83.0	65.8	Lowest 90%	77.4
700 - 799	4.4	6.5	87.4	72.3	100%	100.0
800 - 899	6.0	11.2	93.4	83.5		
900 - 999	2.2	4.7	95.6	88.2		
1000-1249	2.2	5.2	97.8	93.4		
1250 and over	2.2	6.6	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3007
Standard Deviation of Income	267.1
Total Household Incomes (ID)	84894
Total Number of Households	183
Average Income per Household (ID)	463
Average Number of Persons per Household	6.8

APPENDIX C
TABLE (C.24)
GOVERNORATE: MAYSAN
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	1.1	0.2	1.1	0.2	Lowest 10%	3.8
100 - 149	0	0	0	0	Lowest 20%	8.3
150 - 199	16.1	6.6	17.2	6.8	Lowest 30%	13.8
200 - 249	11.8	6.4	29.0	13.2	Lowest 40%	20.7
250 - 299	5.4	3.2	34.4	16.4	Lowest 50%	28.3
300 - 399	25.8	19.6	60.2	36.0	Lowest 60%	35.8
400 - 499	18.3	18.7	78.5	54.7	Lowest 70%	46.0
500 - 599	8.6	10.6	87.1	65.3	Lowest 80%	56.5
600 - 699	4.2	6.5	91.3	71.8	Lowest 90%	69.8
700 - 799	1.1	2.6	92.4	74.4	100%	100.0
800 - 899	1.1	2.7	93.5	77.1		
900 - 999	1.1	2.3	94.6	79.4		
1000-1249	1.1	2.6	95.7	82.0		
1250 and over	4.3	18.0	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3412
Standard Deviation of Income	350.5
Total Household Incomes (ID)	41024
Total Number of Households	93
Average Income per Household (ID)	436
Average Number of Persons per Household	6.4

APPENDIX C
TABLE (C.25)
GOVERNORATE: BASRAH
RURAL AND URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME ((per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0.8	0.1	0.8	0.1	Lowest 10%	2.3
100 - 149	5.0	1.0	5.8	1.1	Lowest 20%	6.2
150 - 199	6.2	1.8	12.0	2.9	Lowest 30%	12.0
200 - 249	5.4	2.1	17.4	5.0	Lowest 40%	18.4
250 - 299	4.2	1.9	21.6	6.9	Lowest 50%	26.3
300 - 399	16.5	10.0	38.1	16.9	Lowest 60%	34.9
400 - 499	17.4	13.8	55.5	30.7	Lowest 70%	45.1
500 - 599	10.7	10.1	66.2	40.8	Lowest 80%	56.9
600 - 699	10.7	12.0	76.9	52.8	Lowest 90%	74.0
700 - 799	3.3	4.4	80.2	57.2	100%	100.0
800 - 899	3.7	5.7	83.9	62.9		
900 - 999	2.1	3.2	86.0	66.1		
1000-1249	7.4	14.6	93.4	80.7		
1250 and over	6.6	19.3	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3532
Standard Deviation of Income	406.0
Total Household Incomes (ID)	140023
Total Number of Households	242
Average Income per Household (ID)	578
Average Number of Persons per Household	7.4

APPENDIX C
TABLE (C.26)
GOVERNORATE: DHOK
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.3
100 - 149	8.0	2.5	8.0	2.5	Lowest 20%	7.4
150 - 199	12.0	4.9	20.0	7.4	Lowest 30%	12.7
200 - 249	16.0	8.5	36.0	15.9	Lowest 40%	18.5
250 - 299	12.0	7.8	48.0	23.7	Lowest 50%	23.7
300 - 399	20.0	17.3	68.0	41.0	Lowest 60%	34.1
400 - 499	12.0	12.9	80.0	53.9	Lowest 70%	43.2
500 - 599	8.0	10.2	88.0	64.1	Lowest 80%	53.9
600 - 699	8.0	12.6	96.0	76.7	Lowest 90%	67.3
700 - 799	0	0	0	0	100%	100.0
800 - 899	0	0	0	0		
900 - 999	0	0	0	0		
1000-1249	0	0	0	0		
1250 and over	4.0	23.3	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3803
Standard Deviation of Income	440.0
Total Household Incomes (ID)	10278
Total Number of Households	25
Average Income per Household (ID)	411
Average Number of Persons per Household	6.9

APPENDIX C
TABLE (C.27)
GOVERNORATE: NINEVEH
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	3.2	0.4	3.2	0.4	Lowest 10%	2.2
100 - 149	4.8	1.1	8.0	1.5	Lowest 20%	6.2
150 - 199	8.8	3.2	16.8	4.7	Lowest 30%	10.7
200 - 249	13.6	6.2	30.4	10.9	Lowest 40%	16.3
250 - 299	8.8	4.8	39.2	15.7	Lowest 50%	23.3
300 - 399	15.2	10.7	54.4	26.4	Lowest 60%	31.6
400 - 499	4.8	4.3	59.2	30.7	Lowest 70%	42.7
500 - 599	11.2	12.5	70.4	43.2	Lowest 80%	56.7
600 - 699	5.6	7.4	76.0	50.6	Lowest 90%	73.1
700 - 799	10.4	15.9	86.4	66.5	100%	100.0
800 - 899	1.6	2.7	88.0	69.2		
900 - 999	4.0	7.7	92.0	76.9		
1000-1249	4.0	9.1	96.0	86.0		
1250 and over	4.0	14.0	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3807
Standard Deviation of Income	388.1
Total Household Incomes (ID)	62100
Total Number of Households	125
Average Income per Household (ID)	497
Average Number of Persons per Household	7.5

APPENDIX C
TABLE (C.28)
GOVERNORATE: SULAIMANIYA
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.8
100 - 149	0	0	0	0	Lowest 20%	8.7
150 - 199	3.3	1.1	3.3	1.1	Lowest 30%	14.4
200 - 249	11.9	5.1	15.2	6.2	Lowest 40%	21.2
250 - 299	11.9	6.2	27.1	12.4	Lowest 50%	29.8
300 - 399	15.2	10.4	42.3	22.8	Lowest 60%	39.8
400 - 499	11.9	10.8	54.2	33.6	Lowest 70%	50.4
500 - 599	16.9	18.0	71.1	51.6	Lowest 80%	62.6
600 - 699	8.5	10.4	79.6	62.0	Lowest 90%	78.2
700 - 799	5.1	7.4	84.7	69.4	100%	100.0
800 - 899	6.8	11.3	91.5	80.7		
900 - 999	1.7	3.1	93.2	83.8		
1000-1249	5.1	11.0	98.3	94.8		
1250 and over	1.7	5.2	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.2864
Standard Deviation of Income	279.9
Total Household Incomes (ID)	30066
Total Number of Households	59
Average Income per Household (ID)	510
Average Number of Persons per Household	6.8

APPENDIX C
TABLE (C.29)
GOVERNORATE: KIRKUK
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	1.0	0.2	1.0	0.2	Lowest 10%	3.6
100 - 149	1.0	0.2	2.0	0.4	Lowest 20%	8.1
150 - 199	5.0	1.8	7.0	2.2.	Lowest 30%	13.6
200 - 249	14.0	6.4	21.0	8.6	Lowest 40%	19.7
250 - 299	15.0	8.4	36.0	17.0	Lowest 50%	26.7
300 - 399	19.0	13.1	55.0	30.1	Lowest 60%	34.7
400 - 499	12.0	11.0	67.0	41.1	Lowest 70%	44.5
500 - 599	10.0	11.2	77.0	52.3	Lowest 80%	56.5
600 - 699	2.0	2.7	79.0	55.0	Lowest 90%	74.4
700 - 799	4.0	6.1	83.0	61.1	100%	100.0
800 - 899	2.0	3.5	85.0	64.6		
900 - 999	6.0	11.8	91.0	76.4		
1000-1249	6.0	13.9	97.00	90.3		
1250 and over	3.0	9.7	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3420
Standard Deviation of Income	330.9
Total Household Incomes (ID)	48186
Total Number of Households	100
Average Income per Household (ID)	482
Average Number of Persons per Household	6.8

APPENDIX C
TABLE (C.30)
GOVERNORATE: ARBIL
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	4.0	0.6	4.0	0.6	Lowest 10%	2.6
100 - 149	4.0	1.2	8.0	1.8	Lowest 20%	6.8
150 - 199	8.0	3.1	16.0	4.9	Lowest 30%	11.6
200 - 249	16.0	7.6	32.0	12.5	Lowest 40%	17.1
250 - 299	12.0	6.9	44.0	19.4	Lowest 50%	23.7
300 - 399	12.0	8.6	56.0	28.0	Lowest 60%	31.9
400 - 499	12.0	11.6	68.0	39.6	Lowest 70%	42.0
500 - 599	10.0	11.9	78.0	51.5	Lowest 80%	54.2
600 - 699	10.0	13.3	88.0	64.8	Lowest 90%	68.6
700 - 799	0	0	0	0	100%	100.0
800 - 899	2.0	3.8	90.0	68.6		
900 - 999	2.0	3.9	92.0	72.5		
1000-1249	2.0	5.4	94.0	77.9		
1250 and over	6.0	22.1	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3902
Standard Deviation of Income	389.4
Total Household Incomes (ID)	23118
Total Number of Households	50
Average Income per Household (ID)	462
Average Number of Persons per Household	6.4

APPENDIX C
TABLE (C.31)
GOVERNORATE: DIALA
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.6
100 - 149	0	0	0	0	Lowest 20%	9.3
150 - 199	5.4	1.8	5.4	1.8	Lowest 30%	15.7
200 - 249	7.3	2.9	12.7	4.7	Lowest 40%	22.0
250 - 299	0	0	0	0	Lowest 50%	29.7
300 - 399	29.1	18.5	41.8	23.2	Lowest 60%	37.7
400 - 499	18.2	14.5	60.0	37.7	Lowest 70%	47.8
500 - 599	10.9	11.0	70.9	48.7	Lowest 80%	59.3
600 - 699	10.9	12.7	81.8	61.4	Lowest 90%	74.4
700 - 799	3.6	5.1	85.4	66.5	100%	100.0
800 - 899	1.8	2.7	87.2	69.2		
900 - 999	1.8	3.2	89.0	72.4		
1000-1249	5.5	10.8	94.5	83.2		
1250 and over	5.5	16.8	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3058
Standard Deviation of Income	363.5
Total Household Incomes (ID)	30492
Total Number of Households	55
Average Income per Household (ID)	554
Average Number of Persons per Household	6.8

APPENDIX C
TABLE (C.32)
GOVERNORATE: ANBAR
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.6
100 - 149	0	0	0	0	Lowest 20%	8.7
150 - 199	4.0	1.1	4.0	1.1	Lowest 30%	15.5
200 - 249	8.0	3.4	12.0	4.5	Lowest 40%	22.2
250 - 299	8.0	4.2	20.0	8.7	Lowest 50%	28.9
300 - 399	32.0	21.6	52.0	30.3	Lowest 60%	37.2
400 - 499	12.0	10.3	64.0	40.6	Lowest 70%	46.9
500 - 599	8.0	8.4	72.0	49.0	Lowest 80%	53.4
600 - 699	4.0	4.9	76.0	53.9	Lowest 90%	73.6
700 - 799	12.0	16.4	88.0	70.3	100%	100.0
800 - 899	4.0	6.5	92.0	76.8		
900 - 999	4.0	7.2	96.0	84.0		
1000-1249	0	0	0	0		
1250 and over	4.0	16.0	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3160
Standard Deviation of Income	391.0
Total Household Incomes (ID)	13284
Total Number of Households	25
Average Income per Household (ID)	531
Average Number of Persons per Household	7.2

APPENDIX C
TABLE (C.33)
GOVERNORATE: BAGHDAD
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.1
100 - 149	0.2	0.0	0.2	0.0	Lowest 20%	7.5
150 - 199	1.6	0.4	1.8	0.4	Lowest 30%	12.2
200 - 249	4.8	1.4	6.6	1.8	Lowest 40%	18.1
250 - 299	5.4	2.0	12.0	3.8	Lowest 50%	24.8
300 - 399	16.4	7.5	28.4	11.3	Lowest 60%	33.2
400 - 499	14.8	8.7	43.2	20.0	Lowest 70%	43.3
500 - 599	8.5	6.0	51.7	26.0	Lowest 80%	56.1
600 - 699	8.0	6.8	59.7	32.8	Lowest 90%	76.0
700 - 799	7.1	7.0	66.8	39.8	100%	100.0
800 - 899	5.7	6.3	72.5	46.1		
900 - 999	4.5	5.6	77.0	51.7		
1000-1249	7.4	10.8	84.4	62.5		
1250 and over	15.6	37.5	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3561
Standard Deviation of Income	570.6
Total Household Incomes (ID)	49572
Total Number of Households	647
Average Income per Household (ID)	766
Average Number of Persons per Household	7.5

APPENDIX C
TABLE (C.34)
GOVERNORATE: BABYLON
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	2.4
100 - 149	4.0	0.7	4.0	0.7	Lowest 20%	6.4
150 - 199	2.0	0.5	6.0	1.2	Lowest 30%	11.2
200 - 249	4.0	1.2	10.0	2.4	Lowest 40%	16.8
250 - 299	10.0	4.0	20.0	6.4	Lowest 50%	23.9
300 - 399	16.0	7.7	36.0	14.1	Lowest 60%	31.5
400 - 499	10.0	6.7	46.0	20.8	Lowest 70%	43.7
500 - 599	14.0	10.7	60.0	31.5	Lowest 80%	58.8
600 - 699	0	0	0	0	Lowest 90%	78.1
700 - 799	2.0	2.1	62.0	33.6	100%	100.0
800 - 899	6.0	7.4	68.0	41.0		
900 - 999	4.0	5.3	72.0	46.3		
1000-1249	12.0	18.7	84.0	65.0		
1250 and over	16.0	35.0	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3579
Standard Deviation of Income	489.6
Total Household Incomes (ID)	36658
Total Number of Households	50
Average Income per Household (ID)	711
Average Number of Persons per Household	8.2

APPENDIX C
TABLE (C.35)
GOVERNORATE: KERBELA
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	1.0	0.1	1.0	0.1	Lowest 10%	3.4
100 - 149	1.0	0.2	2.0	0.3	Lowest 20%	8.3
150 - 199	2.0	0.6	4.0	0.9	Lowest 30%	14.9
200 - 249	5.0	2.0	9.0	2.9	Lowest 40%	22.5
250 - 299	10.0	4.8	19.0	7.7	Lowest 50%	31.5
300 - 399	14.0	9.1	33.0	16.8	Lowest 60%	41.4
400 - 499	12.0	9.7	45.0	26.5	Lowest 70%	51.9
500 - 599	21.0	20.8	66.0	47.3	Lowest 80%	64.2
600 - 699	10.0	11.5	76.0	58.8	Lowest 90%	78.9
700 - 799	9.0	12.2	85.0	71.0	100%	100.0
800 - 899	3.0	4.5	88.0	75.5		
900 - 999	4.0	6.8	92.0	82.3		
1000-1249	4.0	7.9	96.0	90.2		
1250 and over	4.0	9.8	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.2709
Standard Deviation of Income	282.3
Total Household Incomes (ID)	55548
Total Number of Households	100
Average Income per Household (ID)	555
Average Number of Persons per Household	7.6

APPENDIX C
TABLE (C.36)
GOVERNORATE: WASIT
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	2.6
100 - 149	4.1	1.0	4.1	1.0	Lowest 20%	7.5
150 - 199	6.1	1.7	10.2	2.7	Lowest 30%	13.5
200 - 249	0	0	0	0	Lowest 40%	19.6
250 - 299	8.2	3.9	18.4	6.6	Lowest 50%	26.7
300 - 399	20.4	12.1	38.8	18.7	Lowest 60%	36.0
400 - 499	12.2	8.7	51.0	27.4	Lowest 70%	46.5
500 - 599	14.3	13.7	65.3	41.1	Lowest 80%	58.7
600 - 699	8.2	9.4	73.5	50.5	Lowest 90%	72.0
700 - 799	12.3	15.5	85.8	66.0	100%	100.0
800 - 899	4.1	5.8	89.8	71.8		
900 - 999	2.0	3.3	91.9	75.1		
1000-1249	2.0	3.9	93.9	79.0		
1250 and over	6.1	21.0	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3396
Standard Deviation of Income	447.1
Total Household Incomes (ID)	28326
Total Number of Households	49
Average Income per Household (ID)	578
Average Number of Persons per Household	6.9

APPENDIX C
TABLE (C.37)
GOVERNORATE: QADISIYA
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	4.3
100 - 149	2.0	0.7	2.0	0.7	Lowest 20%	8.7
150 - 199	24.0	10.7	26.0	11.4	Lowest 30%	13.7
200 - 249	14.0	8.2	40.0	19.6	Lowest 40%	19.6
250 - 299	22.0	15.2	62.0	34.8	Lowest 50%	26.5
300 - 399	16.0	13.6	78.0	48.4	Lowest 60%	33.4
400 - 499	8.0	9.2	86.0	57.6	Lowest 70%	41.6
500 - 599	2.0	2.9	88.0	60.5	Lowest 80%	50.7
600 - 699	2.0	3.2	90,0	63.7	Lowest 90%	63.7
700 - 799	0	0	0	0	100%	100.0
800 - 899	0	0	0	0		
900 - 999	2.0	4.9	92.0	68.6		
1000-1249	4.0	12.0	96.0	80.6		
1250 and over	4.0	19.4	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3830
Standard Deviation of Income	393.9
Total Household Incomes (ID)	20058
Total Number of Households	50
Average Income per Household (ID)	401
Average Number of Persons per Household	6.7

APPENDIX C
TABLE (C.38)
GOVERNORATE: MUTHANNA
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.3
100 - 149	0	0	0	0	Lowest 20%	7.5
150 - 199	0	0	0	0	Lowest 30%	12.4
200 - 249	4.0	1.1	4.0	1.1	Lowest 40%	17.7
250 - 299	12.0	4.5	16.0	5.6	Lowest 50%	23.6
300 - 399	20.0	9.7	36.0	15.3	Lowest 60%	30.9
400 - 499	16.0	9.5	52.0	24.8	Lowest 70%	43.1
500 - 599	8.0	6.1	60.0	30.9	Lowest 80%	55.8
600 - 699	0	0	0	0	Lowest 90%	76.0
700 - 799	0	0	0	0	100%	100.0
800 - 899	12.0	14.6	72.0	45.5		
900 - 999	8.0	10.3	80.0	55.8		
1000-1249	4.0	5.8	84.0	61.6		
1250 and over	16.0	38.4	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3628
Standard Deviation of Income	533.3
Total Household Incomes (ID)	17910
Total Number of Households	25
Average Income per Household (ID)	716
Average Number of Persons per Household	7.9

APPENDIX C
TABLE (C.39)
GOVERNORATE: THI-QAR
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	2.2	0.2	2.2	0.2	Lowest 10%	2.5
100 - 149	0	0	0	0	Lowest 20%	6.4
150 - 199	8.9	2.6	11.1	2.8	Lowest 30%	11.7
200 - 249	8.9	3.6	20.0	6.4	Lowest 40%	17.6
250 - 299	6.7	3.4	26.7	9.8	Lowest 50%	24.5
300 - 399	17.8	10.4	44.5	20.2	Lowest 60%	32.9
400 - 499	13.3	10.5	57.8	30.7	Lowest 70%	43.1
500 - 599	8.9	8.7	66.7	39.4	Lowest 80%	57.3
600 - 699	4.4	5.0	71.1	44.4	Lowest 90%	75.8
700 - 799	4.4	6.1	75.5	50.5	100%	100.0
800 - 899	6.7	10.1	82.2	60.6		
900 - 999	0	0	0	0		
1000-1249	8.9	17.4	91.1	78.0		
1250 and over	8.9	22.0	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3599
Standard Deviation of Income	381.8
Total Household Incomes (ID)	25236
Total Number of Households	45
Average Income per Household (ID)	561
Average Number of Persons per Household	7.0

APPENDIX C
TABLE (C.40)
GOVERNORATE: MAYSAN
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	2.9
100 - 149	0	0	0	0	Lowest 20%	5.9
150 - 199	20.0	5.9	20.0	5.9	Lowest 30%	9.9
200 - 249	12.0	4,8	32.0	10.7	Lowest 40%	14.5
250 - 299	8.0	3.8	40.0	14.5	Lowest 50%	20.7
300 - 399	12.0	7.4	52.0	21.9	Lowest 60%	27.5
400 - 499	12.0	9.8	64.0	31.7	Lowest 70%	37.3
500 - 599	16.0	14.9	80.0	46.6	Lowest 80%	46.6
600 - 699	0	0	0	0	Lowest 90%	66.9
700 - 799	0	0	0	0	100%	100.0
800 - 899	0	0	0	0		
900 - 999	4.0	6.5	84.0	53.1		
1000-1249	4.0	7.2	88.0	60.3		
1250 and over	12.0	39.7	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.4372
Standard Deviation of Income	559.5
Total Household Incomes (ID)	14538
Total Number of Households	25
Average Income per Household (ID)	582
Average Number of Persons per Household	6.7

APPENDIX C
TABLE (C.41)
GOVERNORATE: BASRAH
URBAN AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0.6	0.1	0.6	0.1	Lowest 10%	2.5
100 - 149	5.2	1.1	5.8	1.2	Lowest 20%	6.4
150 - 199	6.4	2.0	12.2	3.2	Lowest 30%	12.2
200 - 249	6.9	2.7	19.1	5.9	Lowest 40%	18.5
250 - 299	4.0	2.0	23.1	7.9	Lowest 50%	26.3
300 - 399	19.1	12.0	42.2	19.9	Lowest 60%	34.8
400 - 499	16.2	13.3	58.4	33.2	Lowest 70%	44.7
500 - 599	11.0	10.8	69.4	44.0	Lowest 80%	56.7
600 - 699	9.2	10.8	78.6	54.8	Lowest 90%	73.1
700 - 799	2.9	3.9	81.5	58.7	100%	100.0
800 - 899	4.6	7.0	86.1	65.7		
900 - 999	1.2	2.0	87.3	67.7		
1000-1249	5.8	11.7	93.1	79.4		
1250 and over	6.9	20.6	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3545
Standard Deviation of Income	403.6
Total Household Incomes (ID)	96414
Total Number of Households	173
Average Income per Household (ID)	557
Average Number of Persons per Household	7.2

APPENDIX C

TABLE (C.42)

GOVERNORATE: DHOK

RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.8
100 - 149	0	0	0	0	Lowest 20%	8.7
150 - 199	8.0	2.8	8.0	2.8	Lowest 30%	14.1
200 - 249	18.0	8.9	26.0	11.7	Lowest 40%	20.0
250 - 299	16.0	9.5	42.0	21.2	Lowest 50%	27.4
300 - 399	10.0	7.7	52.0	28.9	Lowest 60%	36.4
400 - 499	18.0	16.9	70.0	45.8	Lowest 70%	45.8
500 - 599	4.0	4.8	74.0	50.6	Lowest 80%	58.8
600 - 699	12.0	16.5	86.0	67.1	Lowest 90%	75.1
700 - 799	0	0	0	0	100%	100.0
800 - 899	0	0	0	0		
900 - 999	6.0	12.0	92.0	79.1		
1000-1249	6.0	14.5	98.0	93.6		
1250 and over	2.0	6.4	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3246
Standard Deviation of Income	300.8
Total Household Incomes (ID)	23292
Total Number of Households	50
Average Income per Household (ID)	466
Average Number of Persons per Household	7.2

APPENDIX C
TABLE (C.43)
GOVERNORATE: NINEVEH
RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	3.0	0.4	3.0	0.4	Lowest 10%	2.7
100 - 149	9.1	3.0	12.1	3.4	Lowest 20%	7.0
150 - 199	13.1	5.9	25.2	9.3	Lowest 30%	12.0
200 - 249	8.1	4.5	33.3	13.8	Lowest 40%	18.5
250 - 299	7.1	5.0	40.4	18.8	Lowest 50%	27.1
300 - 399	15.2	13.1	55.6	31.9	Lowest 60%	37.1
400 - 499	12.1	14.2	67.7	46.1	Lowest 70%	49.3
500 - 599	13.1	18.1	80.8	64.2	Lowest 80%	63.1
600 - 699	8.1	13.2	88.9	77.4	Lowest 90%	79.5
700 - 799	7.1	13.7	96.0	91.1	100%	100.0
800 - 899	3.0	6.5	99.0	97.6		
900 - 999	1.0	2.4	100.0	100.0		
1000-1249	0	0				
1250 and over	0	0				
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3113
Standard Deviation of Income	217.4
Total Household Incomes (ID)	38706
Total Number of Households	99
Average Income per Household (ID)	391
Average Number of Persons per Household	6.2

APPENDIX C

TABLE (C.44)

GOVERNORATE: SULAIMANIYA

RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	4.6
100 - 149	0	0	0	0	Lowest 20%	10.1
150 - 199	0	0	0	0	Lowest 30%	16.5
200 - 249	3.1	1.3	3.1	1.3	Lowest 40%	23.9
250 - 299	12.5	6.0	15.6	7.3	Lowest 50%	31.9
300 - 399	18.7	12.0	34.3	19.3	Lowest 60%	40.8
400 - 499	21.9	17.6	56.2	36.9	Lowest 70%	50.9
500 - 599	14.1	14.3	70.3	51.2	Lowest 80%	62.2
600 - 699	9.4	10.6	79.7	61.8	Lowest 90%	77.5
700 - 799	4.7	6.3	84.4	68.1	100%	100.0
800 - 899	0	0	0	0		
900 - 999	6.2	10.4	90.6	78.5		
1000-1249	4.7	9.6	95.3	88.1		
1250 and over	4.7	11.9	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.2745
Standard Deviation of Income	296.9
Total Household Incomes (ID)	35652
Total Number of Households	64
Average Income per Household (ID)	557
Average Number of Persons per Household	5.8

APPENDIX C
TABLE (C.45)
GOVERNORATE: KIRKUK
RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	2.9
100 - 149	2.7	0.6	2.7	0.6	Lowest 20%	7.3
150 - 199	8.0	2.5	10.7	3.1	Lowest 30%	12.5
200 - 249	6.6	2.9	17.3	6.0	Lowest 40%	18.9
250 - 299	10.7	5.3	28.0	11.2	Lowest 50%	26.5
300 - 399	18.7	12.0	46.7	23.2	Lowest 60%	34.3
400 - 499	13.3	11.1	60.0	34.3	Lowest 70%	44.5
500 - 599	13.3	13.5	73.3	47.8	Lowest 80%	54.2
600 - 699	5.3	6.4	78.6	54.2	Lowest 90%	71.8
700 - 799	5.3	7.4	83.9	61.6	100%	100.0
800 - 899	2.7	4.1	86.6	65.7		
900 - 999	2.7	4.7	89.3	70.4		
1000-1249	2.7	5.3	92.0	75.7		
1250 and over	8.0	24.3	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3559
Standard Deviation of Income	400.1
Total Household Incomes (ID)	40524
Total Number of Households	75
Average Income per Household (ID)	540
Average Number of Persons per Household	6.3

APPENDIX C
TABLE (C.46)
GOVERNORATE: ARBIL
RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	4.5
100 - 149	2.7	1.0	2.7	1.0	Lowest 20%	10.2
150 - 199	6.7	3.2	9.4	4.2	Lowest 30%	15.8
200 - 249	22.7	12.8	32.1	17.0	Lowest 40%	22.5
250 - 299	12.0	8.4	44.1	25.4	Lowest 50%	30.5
300 - 399	25.3	22.5	69.4	47.9	Lowest 60%	39.4
400 - 499	16.0	18.3	85.4	66.2	Lowest 70%	48.6
500 - 599	2.7	3.6	88.1	69.8	Lowest 80%	60.0
600 - 699	5.3	8.6	93.4	78.4	Lowest 90%	72.9
700 - 799	1.3	2.6	94.7	81.0	100%	100.0
800 - 899	0	0	0	0		
900 - 999	0	0	0	0		
1000-1249	4.0	11.6	98.7	92.6		
1250 and over	1.3	7.4	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.2988
Standard Deviation of Income	292.1
Total Household Incomes (ID)	29208
Total Number of Households	75
Average Income per Household (ID)	389
Average Number of Persons per Household	6.4

APPENDIX C

TABLE (C.47)

GOVERNORATE: DIALA

RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	1.5	0.1	1.5	0.1	Lowest 10%	2.4
100 - 149	4.4	0.9	5.9	1.0	Lowest 20%	6.9
150 - 199	4.4	1.5	10.3	2.5	Lowest 30%	12.8
200 - 249	4.4	1.7	14.7	4.2	Lowest 40%	19.5
250 - 299	10.3	5.3	25.0	9.5	Lowest 50%	27.1
300 - 399	19.1	12.7	44.1	22.2	Lowest 60%	35.9
400 - 499	13.2	11.0	57.3	33.2	Lowest 70%	47.1
500 - 599	5.9	6.0	63.2	39.2	Lowest 80%	60.6
600 - 699	8.8	10.3	72.0	49.5	Lowest 90%	76.2
700 - 799	11.8	16.4	83.8	65.9	100%	100.0
800 - 899	4.4	7.1	88.2	73.0		
900 - 999	1.5	2.6	89.7	75.6		
1000-1249	7.4	14.7	97.1	90.3		
1250 and over	2.9	9.7	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3289
Standard Deviation of Income	342.1
Total Household Incomes (ID)	36546
Total Number of Households	68
Average Income per Household (ID)	537
Average Number of Persons per Household	6.9

APPENDIX C

TABLE (C.48)

GOVERNORATE: ANBAR

RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.5
100 - 149	4.0	1.2	4.0	1.2	Lowest 20%	7.4
150 - 199	16.0	6.2	20.0	7.4	Lowest 30%	12.5
200 - 249	16.0	8.2	36.0	15.6	Lowest 40%	18.1
250 - 299	16.0	9.9	52.0	25.5	Lowest 50%	24.3
300 - 399	8.0	6.2	60.0	31.7	Lowest 60%	31.7
400 - 499	8.0	7.9	68.0	39.6	Lowest 70%	42.5
500 - 599	0	0	0	0	Lowest 80%	59.2
600 - 699	4.0	5.7	72.0	45.3	Lowest 90%	77.9
700 - 799	8.0	13.9	80.0	59.2	100%	100.0
800 - 899	12.0	22.5	92.0	81.7		
900 - 999	4.0	8.7	96.0	90.4		
1000-1249	4.0	9.6	100.0	100.0		
1250 and over	0	0				
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3488
Standard Deviation of Income	292.4
Total Household Incomes (ID)	11004
Total Number of Households	25
Average Income per Household (ID)	440
Average Number of Persons per Household	7.6

APPENDIX C
TABLE (C.49)
GOVERNORATE: BAGHDAD
RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.3
100 - 149	0	0	0	0	Lowest 20%	8.0
150 - 199	0	0	0	0	Lowest 30%	14.1
200 - 249	5.8	1.7	5.8	1.7	Lowest 40%	21.2
250 - 299	2.9	1.0	8.7	2.7	Lowest 50%	29.1
300 - 399	8.7	3.8	17.4	6.5	Lowest 60%	38.8
400 - 499	8.7	4.9	26.1	11.4	Lowest 70%	49.5
500 - 599	15.9	11.2	42.0	22.6	Lowest 80%	62.8
600 - 699	8.7	7.1	50.7	29.7	Lowest 90%	80.2
700 - 799	8.7	8.5	59.4	38.2	100%	100.0
800 - 899	10.2	10.8	69.6	49.0		
900 - 999	4.4	5.2	74.0	54.2		
1000-1249	10.1	14.4	84.1	68.6		
1250 and over	15.9	31.4	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.2891
Standard Deviation of Income	417.4
Total Household Incomes (ID)	53904
Total Number of Households	69
Average Income per Household (ID)	781
Average Number of Persons per Household	8.1

APPENDIX C

TABLE (C.50)

GOVERNORATE: BABYLON

RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	2.7	0.3	2.7	0.3	Lowest 10%	2.0
100 - 149	4.0	0.8	6.7	1.1	Lowest 20%	5.2
150 - 199	5.4	1.5	12.1	2.6	Lowest 30%	9.8
200 - 249	6.8	2.1	18.9	4.7	Lowest 40%	15.3
250 - 299	8.1	3.4	27.0	8.1	Lowest 50%	21.8
300 - 399	16.2	9.0	43.2	17.1	Lowest 60%	29.8
400 - 499	9.5	6.6	52.7	23.7	Lowest 70%	40.0
500 - 599	10.8	9.0	63.5	32.7	Lowest 80%	54.0
600 - 699	2.7	2.6	66.2	35.3	Lowest 90%	72.5
700 - 799	2.7	3.2	68.9	38.5	100%	100.0
800 - 899	4.0	5.3	72.9	43.8		
900 - 999	9.5	13.6	82.4	57.4		
1000-1249	5.4	9.1	87.8	66.5		
1250 and over	12.2	33.5	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.4042
Standard Deviation of Income	551.4
Total Household Incomes (ID)	48936
Total Number of Households	74
Average Income per Household (ID)	661
Average Number of Persons per Household	6.7

APPENDIX C
TABLE (C.51)
GOVERNORATE: KERBELA
RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.5
100 - 149	20.8	7.3	20.8	7.3	Lowest 20%	7.0
150 - 199	16.7	8.3	37.5	15.6	Lowest 30%	11.9
200 - 249	16.7	10.2	54.2	25.8	Lowest 40%	17.1
250 - 299	8.2	6.3	62.4	32.1	Lowest 50%	23.2
300 - 399	0	0	0	0	Lowest 60%	30.3
400 - 499	16.7	19.4	79.1	51.5	Lowest 70%	40.9
500 - 599	8.3	12.9	87.4	64.4	Lowest 80%	52.9
600 - 699	4.2	7.8	91.6	72.2	Lowest 90%	77.0
700 - 799	4.2	9.2	95.8	81.4	100%	100.0
800 - 899	0	0	0	0		
900 - 999	0	0	0	0		
1000-1249	0	0	0	0		
1250 and over	4.2	18.6	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3961
Standard Deviation of Income	324.4
Total Household Incomes (ID)	8622
Total Number of Households	24
Average Income per Household (ID)	359
Average Number of Persons per Household	7.7

APPENDIX C
TABLE (C.52)
GOVERNORATE: WASIT
RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.9
100 - 149	0	0	0	0	Lowest 20%	9.0
150 - 199	0	0	0	0	Lowest 30%	15.0
200 - 249	0	0	0	0	Lowest 40%	22.2
250 - 299	2.3	0.7	2.3	0.7	Lowest 50%	29.9
300 - 399	11.4	4.7	13.7	5.4	Lowest 60%	38.0
400 - 499	11.3	6.2	25.0	11.6	Lowest 70%	47.0
500 - 599	9.1	6.1	34.1	17.7	Lowest 80%	60.0
600 - 699	22.7	17.4	56.8	35.1	Lowest 90%	79.3
700 - 799	13.6	12.3	70.4	47.4	100%	100.0
800 - 899	0	0	0	0		
900 - 999	2.3	2.8	72.7	50.2		
1000-1249	9.1	12.2	81.8	62.4		
1250 and over	18.2	37.6	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.2945
Standard Deviation of Income	485.5
Total Household Incomes (ID)	36048
Total Number of Households	44
Average Income per Household (ID)	819
Average Number of Persons per Household	6.8

APPENDIX C

TABLE (C.53)

GOVERNORATE: QADISIYA

RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.9
100 - 149	4.0	1.2	4.0	1.2	Lowest 20%	9.6
150 - 199	2.7	1.1	6.7	2.3	Lowest 30%	15.6
200 - 249	5.3	2.6	12.0	4.9	Lowest 40%	23.2
250 - 299	17.4	10.2	29.4	15.1	Lowest 50%	30.9
300 - 399	20.0	15.2	49.4	30.3	Lowest 60%	40.9
400 - 499	20.0	20.0	69.4	50.3	Lowest 70%	51.0
500 - 599	16.0	19.3	85.4	69.6	Lowest 80%	63.1
600 - 699	5.3	7.4	90.7	77.0	Lowest 90%	76.0
700 - 799	2.7	4.3	93.4	81.3	100%	100.0
800 - 899	1.3	2.4	94.7	83.7		
900 - 999	1.3	2.8	96.0	86.5		
1000-1249	1.3	3.4	97.3	89.9		
1250 and over	2.7	10.1	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.2779
Standard Deviation of Income	290.9
Total Household Incomes (ID)	34458
Total Number of Households	75
Average Income per Household (ID)	459
Average Number of Persons per Household	7.0

APPENDIX C

TABLE (C.54)

GOVERNORATE: MUTHANNA
RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	6.6
100 - 149	0	0	0	0	Lowest 20%	13.6
150 - 199	0	0	0	0	Lowest 30%	21.5
200 - 249	16.6	10.9	16.6	10.9	Lowest 40%	29.4
250 - 299	25.0	19.8	41.6	30.7	Lowest 50%	39.3
300 - 399	37.5	38.7	79.1	69.4	Lowest 60%	49.7
400 - 499	12.5	16.5	91.6	85.9	Lowest 70%	60.0
500 - 599	4.2	6.3	95.8	92.2	Lowest 80%	70.6
600 - 699	4.2	7.8	100.0	100.0	Lowest 90%	83.8
700 - 799	0	0			100%	100.0
800 - 899	0	0				
900 - 999	0	0				
1000-1249	0	0				
1250 and over	0	0				
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.1528
Standard Deviation of Income	106.5
Total Household Incomes (ID)	8332
Total Number of Households	24
Average Income per Household (ID)	343
Average Number of Persons per Household	7.1

APPENDIX C

TABLE (C.55)

GOVERNORATE: THI-QAR

RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	3.8
100 - 149	2.0	0.5	2.0	0.5	Lowest 20%	9.0
150 - 199	6.0	2.3	8.0	2.8	Lowest 30%	15.1
200 - 249	13.0	6.7	21.0	9.5	Lowest 40%	22.4
250 - 299	12.0	7.4	33.0	16.9	Lowest 50%	30.3
300 - 399	21.0	16.6	54.0	33.5	Lowest 60%	39.9
400 - 499	17.0	18.2	71.0	51.7	Lowest 70%	50.6
500 - 599	7.0	8.5	78.0	60.2	Lowest 80%	63.2
600 - 699	8.0	11.8	86.0	72.0	Lowest 90%	78.5
700 - 799	4.0	6.5	90.0	78.5	100%	100.0
800 - 899	6.0	11.4	96.0	89.9		
900 - 999	3.0	6.5	99.0	96.4		
1000-1249	0	0	0	0		
1250 and over	1.0	3.6	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.2787
Standard Deviation of Income	240.7
Total Household Incomes (ID)	44388
Total Number of Households	100
Average Income per Household (ID)	444
Average Number of Persons per Household	6.8

APPENDIX C

TABLE (C.56)

GOVERNORATE: MAYSAN

RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	0	0	0	0	Lowest 10%	4.5
100 - 149	0	0	0	0	Lowest 20%	10.1
150 - 199	2.0	0.4	2.0	0.4	Lowest 30%	16.7
200 - 249	14.0	7.2	16.0	7.6	Lowest 40%	25.4
250 - 299	12.0	7.6	28.0	15.2	Lowest 50%	34.5
300 - 399	4.0	2.9	32.0	18.1	Lowest 60%	43.7
400 - 499	30.0	27.4	62.0	45.5	Lowest 70%	55.0
500 - 599	20.0	23.8	82.0	69.3	Lowest 80%	66.9
600 - 699	8.0	11.7	90.0	81.0	Lowest 90%	81.0
700 - 799	6.0	10.4	96.0	91.4	100%	100.0
800 - 899	2.0	4.2	98.0	95.6		
900 - 999	2.0	4.4	100.0	100.0		
1000-1249	0	0				
1250 and over	0	0				
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.2274
Standard Deviation of Income	158.7
Total Household Incomes (ID)	18432
Total Number of Households	50
Average Income per Household (ID)	369
Average Number of Persons per Household	6.2

APPENDIX C
TABLE (C.57)
GOVERNORATE: BASRAH
RURAL AREAS : INCOME DISTRIBUTION (ADJUSTED) FOR 1971

HOUSEHOLD INCOME (per year ID)	PERCENTAGE OF		CUMULATIVE PERCENTAGE OF		SHARES OF DECILES	
	Total house-holds	House-holds' Income	House-holds	Income	House-holds	Income
Below 100	2.0	0.3	2.0	0.3	Lowest 10%	2.1
100 - 149	4.1	0.8	6.1	1.1	Lowest 20%	6.0
150 - 199	6.1	1.5	12.2	2.6	Lowest 30%	11.9
200 - 249	2.0	0.7	14.2	3.3	Lowest 40%	19.3
250 - 299	4.1	1.7	18.3	5.0	Lowest 50%	26.8
300 - 399	10.2	5.8	28.5	10.8	Lowest 60%	36.2
400 - 499	20.4	15.0	48.9	25.8	Lowest 70%	46.5
500 - 599	8.2	7.4	57.1	33.2	Lowest 80%	59.3
600 - 699	14.3	14.8	71.4	48.0	Lowest 90%	76.2
700 - 799	4.1	4.9	75.5	52.9	100%	100.0
800 - 899	2.0	2.7	77.5	55.6		
900 - 999	4.1	6.0	81.6	61.6		
1000-1249	12.3	21.4	93.9	83.0		
1250 and over	6.1	17.0	100.0	100.0		
TOTAL	100.0	100.0				

Gini Concentration Ratio	0.3366
Standard Deviation of Income	415.6
Total Household Incomes (ID)	30942
Total Number of Households	49
Average Income per Household (ID)	632
Average Number of Persons per Household	7.9

Appendix C

Comparison of Iraqi Income Distribution with other Countries

The inequality in income in any country could be assessed in comparison with that of other countries. There is, however, no agreement about the kind of comparison which can be made, differences in economic structure and the state of economic development affect such a comparison. There are, moreover, further difficulties that must be born in mind: whether data is comprehensive or from a sample survey; for urban or rural areas, or for the country as a whole; the differences in types of income and the nature of income earners.

There are, nevertheless, various means of describing in numerical terms, the distribution of income and the inequality it contains. Table (C.58) shows only two measures used to carry out such a comparison. Firstly, there is the ratio of concentration which gives in a single figure the estimation of the overall inequality. Secondly, the calculation of the income shares of the lowest 20 per cent of households and that of the top 20 per cent. The selection of the countries involved in this comparison was possible only because there existed statistical data within which there was, to some extent, a similar coverage and definition to that of data used in Iraq. These countries were also oil producing.

These estimates for the Gini ratio of concentration show the inequality to be greater than that in Iraq for most of the other countries. This is most obvious in Iran, Libya and Indonesia. The other way is of looking at the income distribution structure itself: the share of total income received by the lowest and highest 20 per cent of households.

Though the share of the lowest 20 per cent is low everywhere, the differences in absolute income levels should be kept in mind. At the other end of the distribution scale, for those in the top 20 per cent of households, though their share is higher than the lower 20 per cent by 6.3 times in Iraq, it is 15.6 times higher in Mexico, 11.4 times higher in Iran.

Appendix C

Table (C.58)

Gini Ratios and Income Shares: Iraq and other countries

Country		Gini Ratio	Income Shares of	
			Lowest 20%	Top 20%
Mexico: 1968[1]		0.3292	3.6	56.0
Iraq: 1971[2]	(a)	0.3615	7.0	44.1
	(b)	0.3683	6.8	44.6
	(c)	0.3417	7.3	42.2
Indonesia: 1969[3]	(a)	0.3867	7.5	48.2
	(b)	0.4062	7.5	41.9
Libya: 1969[4]	(a)	0.4053	5.8	46.8
	(b)	0.4240	5.0	49.4
Iran: 1971[5]		0.4969	4.0	45.8

Source: Regarding figures for other countries than Iraq, the calculations of these ratio and shares was made on the statistical data published by:
UN, ILO: Household Income & Expenditure Statistics, No. 2, 1960-1972, Africa, Asia, Latin America, Geneva, 1974.

1 Mexico, p. 164, Whole country.

2 Iraq: (a) Whole country, (b) Urban areas, (c) Rural areas.

3 Indonesia, p. 87, Urban Households of (a) Jakarta and (b) Bandung.

4 Libya, p. 9, Urban Households of (a) Tripoli and (b) Benghazi.

5 Iran, p. 88, Whole country, urban areas.

Appendix D

Analysis of Income Distribution: Correlation Coefficients, Mean and Standard Deviation

This Appendix is related to Chapter VII on the analysis of income distribution. It contains four tables. The first three tables (D.1, D.2 and D.3) show the matrices of the correlation coefficients for the rural areas, urban areas and for the country as a whole. Table (D.4) shows the mean, the standard deviation and the number of cases for all the dependent and independent variables covered in the analysis.

APPENDIX D
TABLE D.1
Correlation Coefficients Matrix of Rural Areas, 1971

DEPENDENT AND INDEPENDENT VARIABLES	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Income Share of Top 20%	1.00	-0.89	-0.92	-0.86	-0.76	0.95	0.30	0.29	0.33	0.48	0.28	0.27	-0.19
2. Income Share of Middle 40%	-0.89	1.00	0.84	0.72	0.54	-0.83	-0.25	-0.24	-0.39	-0.34	-0.13	-0.04	0.09
3. Income Share of Lowest 60%	-0.92	0.84	1.00	0.97	0.89	-0.99	-0.28	-0.28	-0.40	-0.49	-0.32	-0.28	0.09
4. Income Share of Lowest 40%	-0.86	0.72	0.97	1.00	0.95	-0.97	-0.29	-0.29	-0.35	-0.54	-0.35	-0.38	0.09
5. Income Share of Lowest 20%	-0.76	0.54	0.89	0.95	1.00	-0.90	-0.42	-0.42	-0.34	-0.51	-0.43	-0.51	0.03
4. Gini Ratio of Concentration	0.95	-0.83	-0.99	-0.97	-0.90	1.00	0.30	0.29	0.36	0.53	0.32	0.34	-0.12
7. Log. Income per Household	0.30	-0.25	-0.28	-0.29	-0.42	0.30	1.00	0.99	0.18	0.27	0.26	0.47	-0.06
8. Square Log. Income per Household	0.29	-0.24	-0.28	-0.29	-0.42	0.29	0.99	1.00	0.18	0.27	0.26	0.47	-0.07
9. Growth Rate of GNP	0.33	-0.39	-0.40	-0.35	-0.34	0.36	0.18	0.18	1.00	0.32	0.62	0.42	0.31
10. Growth Rate of Population	0.48	-0.34	-0.49	-0.54	-0.51	0.53	0.27	0.27	0.32	1.00	0.65	0.79	-0.23
11. Share of Urban Population	0.28	-0.13	-0.32	-0.35	-0.43	0.32	0.26	0.26	0.62	0.65	1.00	0.79	0.29
12. Primary School Ratio	0.27	-0.04	-0.28	-0.38	-0.51	0.34	0.47	0.47	0.42	0.79	0.79	1.00	0.01
13. Share of Wages in Agriculture	-0.19	0.09	0.09	0.09	0.03	-0.12	-0.06	0.07	0.31	-0.23	0.29	0.01	1.00

Source: See Appendix D.

APPENDIX D
TABLE D.2
Correlation Coefficients Matrix of Urban Areas, 1971

DEPENDENT AND INDEPENDENT VARIABLES	1	2	3	4	5	6	7	8	9	10	11	12
1. Income Share of Top 20%	1.00	-0.95	-0.74	-0.56	-0.32	0.85	-0.22	-0.21	-0.43	-0.51	-0.25	-0.06
2. Income Share of Middle 40%	-0.95	1.00	0.79	0.58	0.28	-0.86	0.17	0.17	0.48	0.53	0.23	0.03
3. Income Share of Lowest 60%	-0.74	0.79	1.00	0.94	0.73	-0.94	-0.18	-0.19	0.49	0.39	-0.14	0.09
4. Income Share of Lowest 40%	-0.56	0.58	0.94	1.00	0.89	-0.89	-0.20	-0.20	0.50	0.21	-0.20	0.18
5. Income Share of Lowest 20%	-0.32	0.28	0.73	0.89	1.00	-0.69	-0.24	-0.24	0.36	0.07	-0.21	0.17
6. Gini Ratio of Concentration	0.85	-0.86	-0.94	-0.89	-0.69	1.00	-0.10	-0.09	-0.56	-0.39	-0.09	-0.23
7. Log. Income per Household	-0.22	0.17	-0.18	-0.20	-0.24	-0.10	1.00	0.99	0.39	0.16	0.85	0.59
8. Square Log. Income per Household	-0.21	0.17	-0.19	-0.20	-0.24	-0.09	0.99	1.00	0.39	0.16	0.85	0.58
9. Growth Rate of GNP	-0.43	0.48	0.49	0.50	0.36	-0.56	0.39	0.39	1.00	0.32	0.56	0.38
10. Growth Rate of Population	-0.51	0.53	0.39	0.21	0.07	-0.39	0.16	0.16	0.32	1.00	0.41	0.09
11. Share of Industry in GNP	-0.25	0.23	-0.14	-0.20	-0.21	-0.09	0.85	0.85	0.56	0.41	1.00	0.44
12. Urban Literacy Ratio	-0.06	0.03	0.09	0.18	0.17	-0.23	0.59	0.58	0.38	0.09	0.44	1.00

Source: See Appendix D.

APPENDIX D
TABLE D.3
Correlation Coefficients Matrix of All Iraq, 1971

DEPENDENT AND INDEPENDENT VARIABLES	1	2	3	4	5	6	7	8	9	10	11	12
1. Income Share of Top 20%	1.00	-0.82	-0.75	-0.54	-0.24	0.81	0.14	0.14	0.01	-0.26	-0.06	0.12
2. Income Share of Middle 40%	-0.82	1.00	0.65	0.33	-0.06	-0.60	-0.06	-0.06	0.08	0.05	0.22	-0.11
3. Income Share of Lowest 60%	-0.75	0.65	1.00	0.89	0.66	-0.94	-0.25	-0.25	-0.24	0.43	-0.18	-0.47
4. Income Share of Lowest 40%	-0.54	0.33	0.89	1.00	0.82	-0.90	-0.27	-0.27	-0.35	0.45	-0.35	-0.57
5. Income Share of Lowest 20%	-0.24	-0.06	0.66	0.82	1.00	-0.62	-0.44	-0.44	-0.55	0.60	-0.54	-0.56
6. Gini Ratio of Concentration	0.81	-0.60	-0.94	-0.90	-0.62	1.00	0.10	0.10	0.13	-0.37	0.15	0.40
7. Log. Income per Household	0.14	-0.06	-0.25	-0.27	-0.44	0.10	1.00	0.99	0.47	-0.48	0.44	0.38
8. Square Log. Income per Household	0.14	-0.06	-0.25	-0.27	-0.44	0.10	0.99	1.00	0.47	-0.47	0.44	0.38
9. Growth Rate of GNP	-0.01	0.08	-0.24	-0.35	-0.55	0.13	0.47	0.47	1.00	-0.40	-0.62	0.61
10. Share of Agriculture in GNP	-0.26	0.05	0.43	0.45	0.60	-0.37	-0.48	-0.47	-0.40	1.00	0.84	-0.66
11. Share of Urban Population	-0.06	0.22	-0.18	0.35	-0.54	0.15	0.44	0.44	0.62	-0.84	1.00	0.79
12. Secondary School Ratio	0.12	-0.11	0.47	0.57	-0.56	0.40	0.38	0.38	0.61	-0.66	0.79	1.00

Source: See Appendix D.

APPENDIX D
TABLE D.4
The Mean, Standard Deviation and Number of Cases of all Variables

Dependent and Independent Variables	Mean	Standard Deviation	Number of Cases
RURAL AREAS			
Income Share of Top 20%	0.3932	0.0460	16
Income Share of Middle 40%	0.3384	0.0290	16
Income Share of Lowest 60%	0.3768	0.0504	16
Income Share of Lowest 40%	0.2106	0.0348	16
Income Share of Lowest 20%	0.0844	0.0205	16
Gini Ratio of Concentration	0.3063	0.0614	16
Log. Income per Household	2.6935	0.1179	16
Square Log. Income per Household	7.2679	0.6417	16
URBAN AREAS			
Income Share of Top 20%	0.4366	0.0423	16
Income Share of Middle 40%	0.3167	0.0242	16
Income Share of Lowest 60%	0.3429	0.0353	16
Income Share of Lowest 40%	0.1887	0.0228	16
Income Share of Lowest 20%	0.0749	0.0106	16
Gini Ratio of Concentration	0.3515	0.0417	16
Log.Income per Household	2.7372	0.0793	16
Square Log. per Household	7.4982	0.4357	16
IRAQ			
Income Share of Top 20%	0.4207	0.0233	16
Income Share of Middle 40%	0.3275	0.0190	16
Income Share of Lowest 60%	0.3566	0.0229	16
Income Share of Lowest 40%	0.1976	0.0214	16
Income Share of Lowest 20%	0.0774	0.0099	16
Gini Ratio of Concentration	0.3374	0.0290	16
Log. Income per Household	2.7153	0.0814	16
Square Log. Income per Household	7.3792	0.4474	16
Growth Rate of GNP	0.0402	0.0236	16
Growth Rate of Population	0.0241	0.0128	16
Share of Urban Population	0.4656	0.1792	16
Share of Wages in Agriculture	0.1811	0.1598	16
Share of Agriculture in GNP	0.6285	0.1941	16
Share of Industry in GNP	0.1889	0.1260	16
Primary School Ratio	0.1652	0.0322	16
Secondary School Ratio	0.1170	0.0421	16
Urban Literacy Ratio			

Source: See Appendix C

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